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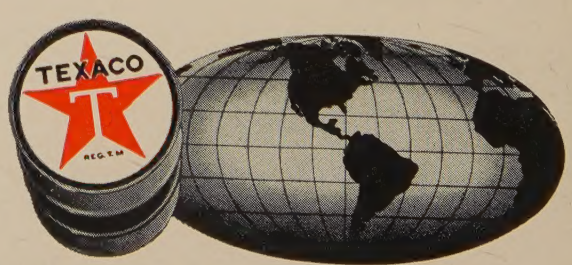

QUALITY AND SERVICE AROUND THE WORLD

PACIFIC FISHERMAN

Our Fifty-Seventh Year— **JUNE, 1959** **Vol. 57 No. 7**

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PACIFIC FISHERMAN (with which is combined Pan-American Fisherman). Published monthly except January when publication is semi-monthly, by Miller Freeman Publications, at 731 S.W. Oak St., Portland 5, Ore. Entered as second class matter at the postoffice at Portland, Ore., under Act of March 3, 1879.

SUBSCRIPTION RATES: U.S., Canada, & Latin America, one year — $3, two years — $5, three years — $7. Other countries: one year — $4. Single copy 50c, except Yearbook Number, $1.

CHANGE OF ADDRESS—Send subscription orders and change of address to Subscription Department, PACIFIC FISHERMAN, 500 Howard St., San Francisco 5, Calif. Include both old and new addresses and zone number.

ADVERTISING: Complete plates only should be sent to PACIFIC FISHERMAN, 235 N.W. Park Ave., Portland 9, Ore. . . . Advertising copy and cuts, instructions and insertion orders should be sent to the Seattle office.

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BRISTOL BAY—
Escapement is VITAL

● Partial opening of Bristol Bay to Red salmon fishing this season is made possible by the terms of the 1959 Northwestern Pacific fishing agreement between the Soviet Union and Japan.

United States for months has contended that Bristol Bay must be closed to American fishermen unless Japan reduced the intensity of its fishing below that of 1956 and 1957 in the area where substantial numbers of Red salmon of Alaska origin are found.

Japan would not, *or could not*, give this assurance; and the United States Bureau of Commercial Fisheries found it necessary virtually to close Bristol Bay.

● Terms which the Soviet Union imposed upon Japan in their 1959 fishing agreement called for reduced intensity of Japan's fishing. Catch of salmon permitted to Japan was sharply curtailed, and the settlement went even further in the matter of timing. The Japanese fleet was delayed in its fishing 11 days beyond the start of the previous year, which would relieve *mature* Reds of Alaska origin from a measure of Japanese exploitation in the sensitive area of intermingling, for the 11 days came at a time when the mature salmon begin their migrations toward their continental origins.

● Thus out of the Soviet-Japan conference came the reduced intensity of fishing deemed essential to conservation of the Bristol Bay salmon resource. Without such reduction it was necessary to close American waters to American fishermen in order to provide the spawning escapement essential to maintain the depleted population.

With the reduction of fishing intensity on the high seas in the sensitive area of intermingling of continental stocks, it became possible to open the Naknek-Kvichak, Egegik and Ugashik districts of Bristol Bay for a few days fishing.

● Limited though it will be at best, the partial opening of Bristol Bay is good news; but—

It must not be permitted to impair the escapement vital to re-building the runs which have suffered depletion on the high seas.

The Bureau of Commercial Fisheries is alert to the possibility that excessive amounts of gear will be marshalled on The Bay. It is permitting 2.5 days of fishing weekly, providing gear registration levels do not exceed 150 units in the Naknek-Kvichak area, 60 units at Egegik, 50 at Ugashik, and 226 at Nushagak.

Gear in excess of these quantities will cut the fishing periods to one day a week, except on the Nushagak, where it drops to two days above 226 units, and to one day above 324.

These are rigorous restrictions, but they are sternly necessary.

Adequate escapement MUST be provided.

It is vital for the future of the salmon resource, on the spawning grounds, and in international negotiations.

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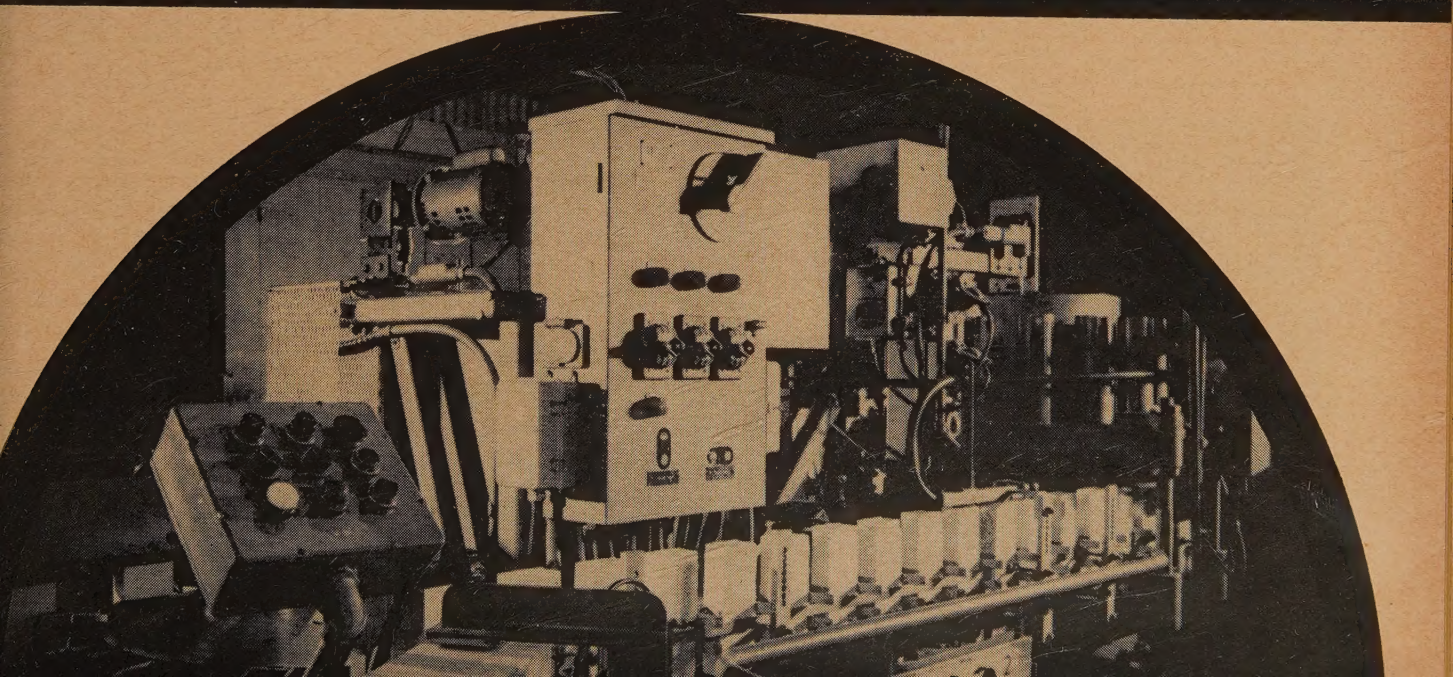
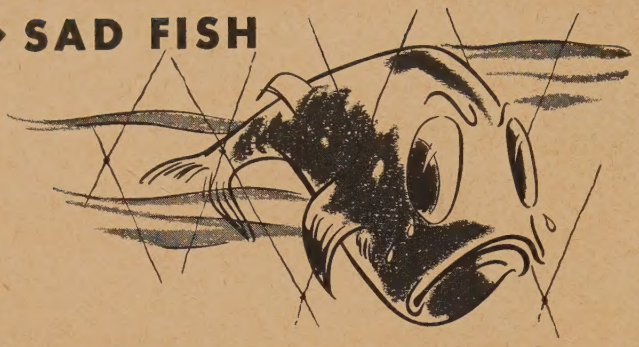


SAD FISH



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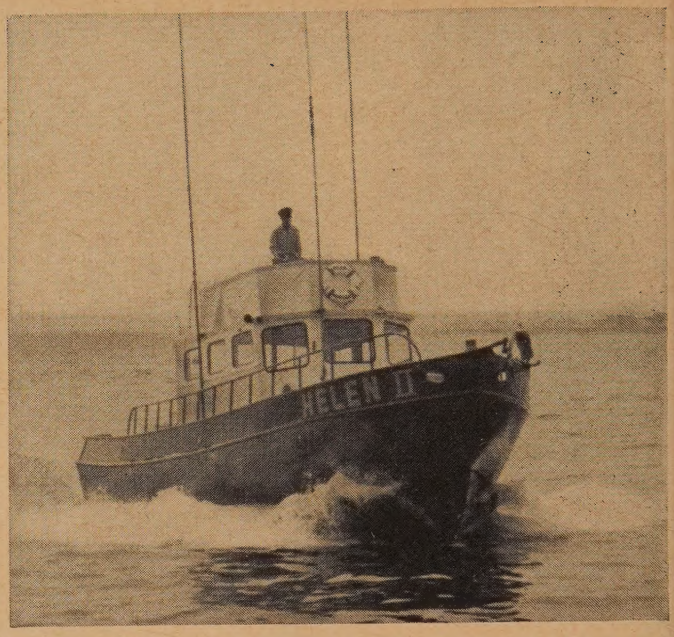

Monel shafts keep Helen on the go

Strong, tough, corrosion-resisting Monel shafts give the trouble-free service she needs

This steel hull party fishing boat, Helen II, was built by Gladding-Hearn of Somerset, Mass. for Capt. George Glas of Montauk Point, N. Y. Like all Gladding-Hearn boats, she's equipped with Monel shafts . . . two 2-inchers.

Mr. Preston R. Gladding, President and Naval Architect, says, "We specify Monel shafts on all the vessels we design and build because we feel a good propulsion unit is as vital to the success of a work boat as a well-designed hull."

Mr. Gladding is absolutely right. For commercial boats must be ready to go at all times during the season. Even a day's layup would be very costly. Shafts of Monel* nickel-copper alloy give these boats the trouble-free service they need.

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There will be no galvanic corrosion on the Monel shafts, because Monel alloy is compatible with Helen's steel hull. Any galvanic action will spread lightly and harmlessly over the whole hull area.

Because Monel is truly the Seagoin' metal, its properties and long service life give you the most for your money. Check with your local boatyard for prices and the right size for your boat. Monel shafting is available on prompt delivery from sources all over the country.

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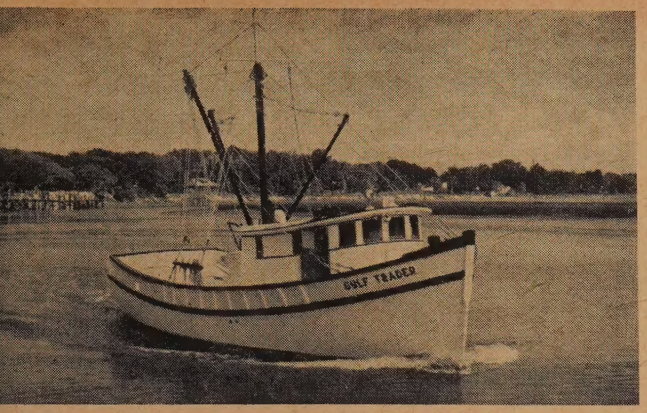

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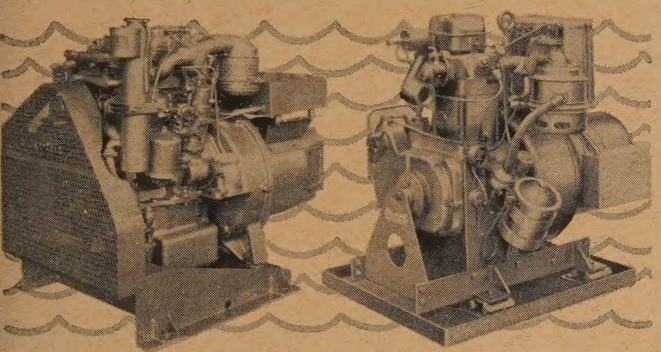

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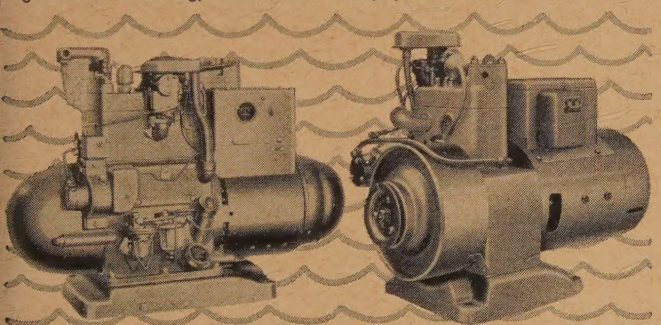

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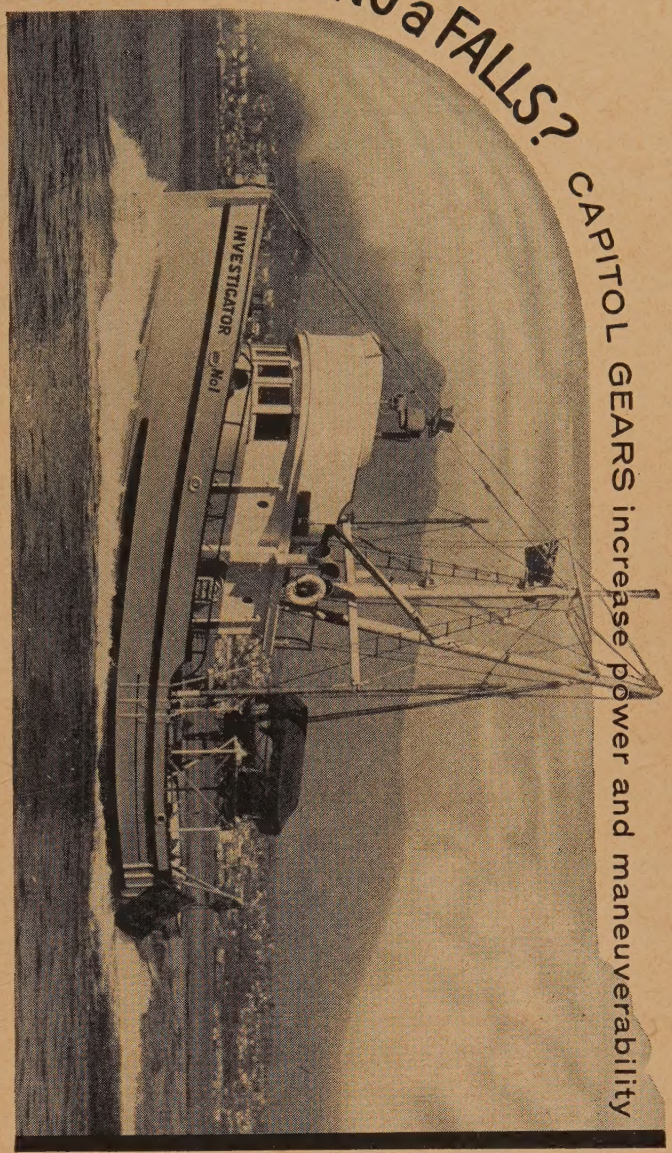

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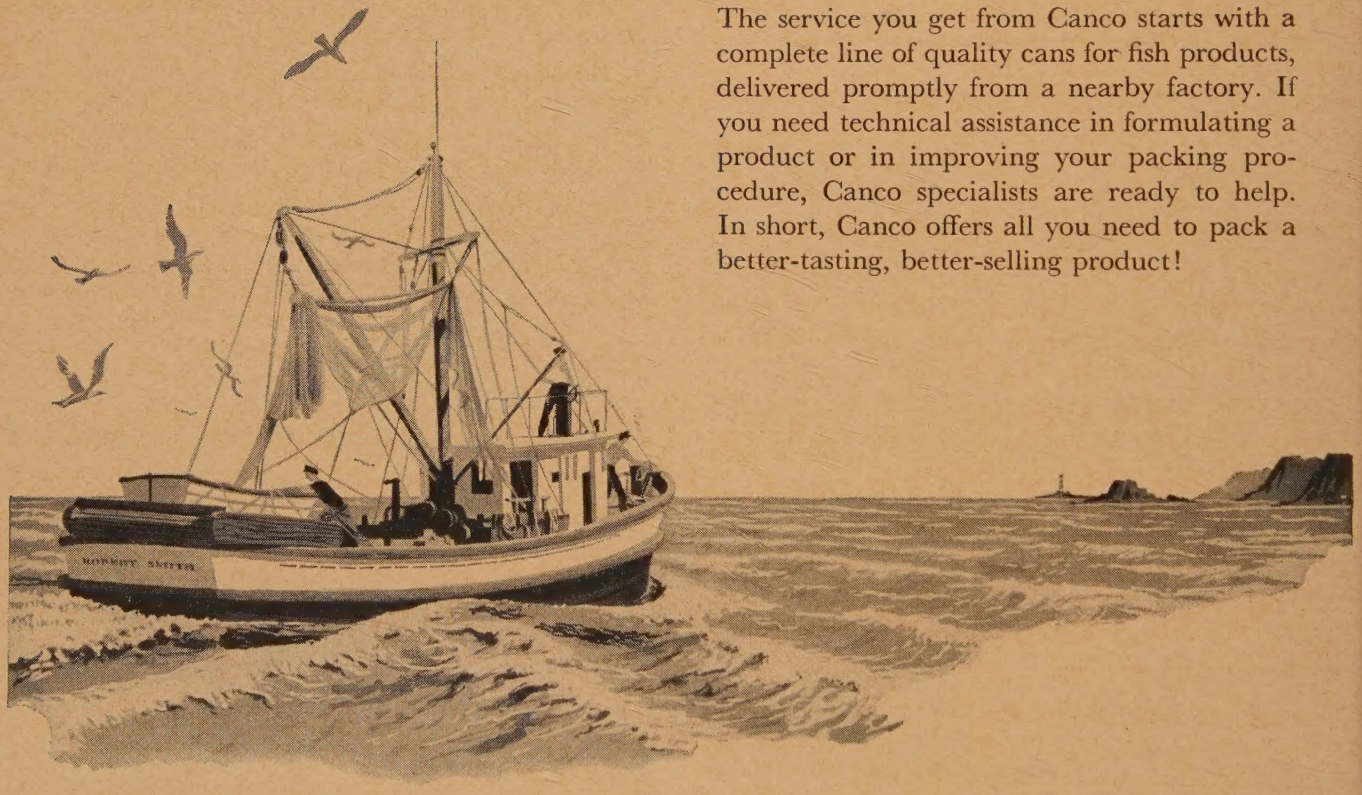

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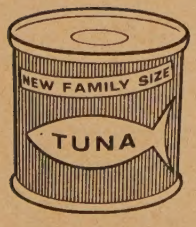

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PACIFIC FISHERMAN JUNE, 1959

Limit on Japanese Fishing Allows Relaxation of Bristol Bay Closure

• Closure of Bristol Bay Red salmon fishing in 1959 will be relaxed slightly, the U. S. Bureau of Commercial Fisheries announced May 25.

Details of the amended regulation were just available at presstime, and they were expected to make possible operation of the Alaska Packers Association cannery at Egegik and the Red Salmon cannery at Naknek on closely limited basis involving consolidation of several companies' interests.

Extent of the opening would depend upon the amount of gear registering for fishing — and might not be for more than one day per week, about four days for the year.

• Relaxation of the closure was made possible by the restrictions on Japanese high seas fishing under the 1959 fishing agreement between Japan and the Soviet Union.

This understanding reduced the Japanese high seas Red salmon catch to 16,000 tons, about two-thirds of the 1958 take; with not over 5,500,000 Reds to be caught east of 165° East Longitude.

This limitation, together with the delay in opening of Japanese fishing until May 22, made it evident that Japanese fishing pressure would be materially reduced below 1956 and 1957 levels in the waters where Red salmon of American origin are found in substantial quantities.

• As long ago as the International North Pacific Fisheries Commission meeting in Tokyo last November the United States Bureau of Commercial Fisheries declared closure of Bristol Bay would be necessary this year unless it could be assured Japan would reduce its fishing pressure on Red salmon stocks of Alaskan origin.

The Japanese government's Fishery Agency declined to give such assurance at the North Pacific Commission meeting, and apparently continued the refusal in negotiations with the United States government in Washington, and in more recent discussions with the American embassy in Tokyo. Attitude of Japan's industrial leaders was much more realistic, and less dogmatic, than the official position.

• In an editorial in its issue for December, 1958, commenting on these very points, *Pacific Fisherman* said:

"In all this one thing is sure: looming behind Japan's attitude is the over-shadowing problem of the coming 1959 *fishery conference with the Soviet Union; and the fact that the U.S.S.R., as well as the United States, is manifesting serious concern with the effect of Japan's high seas fishing upon the spawning escapement upon which the future of the resource depends."*

Out of this concern has come the reduced fishing pressure which is making possible a minor relaxation of the closure imposed on American fishing in American waters.

Japan's Target is 5.5 Million Reds in Area of Intermingling

• Japan's high seas mothership fleets —16 of them, with 380 catcher boats—are fishing for 5,500,000 Red salmon in the sensitive intermingling area from the Provisional Abstention Line in the North Pacific west to 165° East Longitude.

Further west they will seek 2,500,000 more Reds.

The Japanese are limited by their agreement with the Soviet Union—reached in Tokyo May 13—to take no more than 16,000 metric tons of Reds in the ocean covered by their treaty. Last year the Red total was 24,000 tons.

How heavily the 5,500,000 fish catch will bear upon the population native to Alaska depends upon *where* in the zone of intermingling the Japanese pursue their operations.

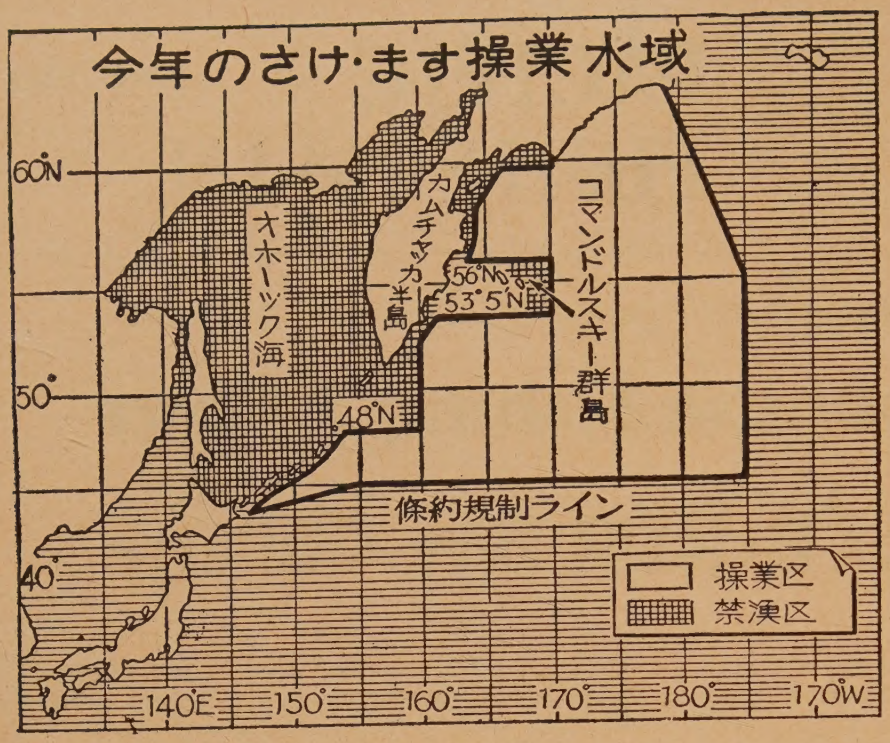
Japanese fishing operations began May 22, later by 11 days than in 1958.

Japan Suffers Defeat On Vital Points

• Four months of negotiations, from January 13 to May 13, produced sharp reversal for the Japanese on virtually every controversial point.

From an initial demand of 160,000 metric tons of salmon they retreated to accept eventually 85,000 tons, while the Soviets at the same time raised their offer from an original 50,000-ton prescription for the Japanese.

The area closed to fishing, as shown in the accompanying sketch chart, involves two sweeping concessions by the Japanese, in addition to the com-



HIGH SEAS FISHING AREA for Japan emerged by the conference with Soviet Russia as shown in the unshaded portion of this sketch. The cross-hatched area is closed. Note particularly the two closed extentions east and south of Kamchatka.

plete closure of high seas fishing in the Okhotsk Sea, effective this season. These Soviet-prescribed areas of closure are:

1. The corridor from 53°5′ North Latitude to 56° North Latitude, and from 170 East Longitude to the Kamchatka coast.

2. The triangular area north of 48° North Latitude and west of 160° East Longitude, this comprising the Okhotsk Sea entrance area around the tip of Kamchatka and through the Kuriles Islands.

The Japanese delegation contended doggedly for further modification of the boundary of this second area, but the Soviets were stubbornly insistent.

Time Runs Out

● Attrition of time, aided by a final concession of 5,000 tons of salmon by the Russians, finally brought the long-drawn conference to a close. Through the period the Soviet delegation played its cards with obvious confidence in the full knowledge that for every day it was protracted after May 1 the Japanese position became progressively untenable.

In 1960 the annual conference is set to start one week later, January 19, in Moscow.

Longlining is Prohibited

● Beside the vital points of catch quota and closed area, both as outlined above, the determinations agreed upon at the Tokyo conference included:

1. Japan to prohibit longline fishing for salmon in the Japan-Russia treaty zone.

2. Japan to enter upon a progressive mesh-size modification program. (Details given below.)

3. Japan to pack not more than 280,000 cases of crab in treaty waters. Soviet to pack under a quota of 420,000 cases of crab.

4. Area on the west coast of Kamchatka between 50° 20′ N and 56° 56′ N to be closed to crab fishing.

5. Both nations to undertake a three-year study of the condition and biology of the herring resource.

6. Joint scientific research by both nations into these specific problems associated with the high seas salmon fishery:

(a) Establishment of a permissible degree of immature Red salmon in the high seas catch.

(b) Means of lessening wounds and damage sustained by salmon from longline and high seas gillnet gear.

(It is to be noted that these two specific points already may be anticipated as certain to be of primary importance in the 1960 conference between Japan and the Soviet Union.)

7. A joint scientific study of salmon predators and their effect upon the resource.

● Plan of the scientific investigations agreed upon are:

Salmon Research—

Japan: To investigate in the mothership fishery the physical condition, body length, weight, and sexual maturity of the catch. To dispatch five investigation vessels of the 150-200 ton type to the Aleutian and Okhotsk areas from May to August for a study of natural condition, wounds and marks of the salmon.

Soviet: Tagging and release of salmon; study on plankton distribution; study of predators, all using 3 or 4 investigation vessels of the 350-ton type.

Crab Research—

Japan: To investigate catch conditions and ecological changes with the factoryships. To employ 100-ton investigation vessels for the tagging of more than 5,000 crabs.

Soviet: Biological and statistical analysis, study of routes of migration, collection of data on food, from May to September.

To Increase Mesh Size

● Mesh and net size limitations resulting from the conference are detailed as follows:

In 1959 more than 1,000 shackles of high seas gillnet of a mesh size above 65 mm. (130 mm. stretched measure) should be used among the 380 fishing vessels serving the 16 motherships.

In 1960 not less than 25% of the gillnets fished by the Japanese fleet shall be of mesh above 65 mm. (130 mm. stretched measure) in the eastern half of the Japan-Soviet treaty area.

One of the prime statements at the conclusion of the conference is translated thus:

"On the mesh of salmon gillnet the commission recognized in a part of the controlled area the desirability of enlarging the mesh size of gillnets above that now used by vessels serving the mothership. In this connection the commission recognizes the necessity of both nations carrying out fishery and scientific investigation and research so that the barrier of the area where net of enlarged mesh should be used be specified as result of the investigation and research."

• No determination was made on the thickness of twine to be employed in high seas gillnets, but the commission said in a formal statement at conclusion of the meeting:

"On the thickness of yarn of the high seas salmon gillnet the commission recognizes the desirability of increasing the thickness of the twine beyond that used at present in order to reduce the wounds and other damage sustained by the salmon; and the necessity of both nations making fishery and scientific investigation in 1959 as to what the proper thickness of twine should be."

Net Operating Rules

• Beside setting a pattern for the use of larger mesh nets in the western part of the Japan-Soviet treaty area, the commission requires that nets fished by each catcher boat shall be limited to 12 kilometers in waters west and north of a line south of Cape Oliutorski to 48° North Latitude, at 170° 25′ East Longitude, and thence diagonally in a southwesterly direction to Akiyura Island.

East and south of these lines, catcher boats may fish 15 kilometers of gillnet.

Thus in the 15-kilometer zone each catcher boat may run 300 shackles of net, each 28 fathoms long; and in the 12-kilometer waters 240 shackles.

The convention stipulates that in the easterly 15-km. area the distance between gillnets in the sea shall be 8 km.; and in the 12-km. westerly waters the nets must be separated by 10 km. (It does not appear that this spacing is enforced among the shore-based gillnet vessels fishing south of 48° North Latitude.)

Present specifications of Japanese high seas gillnet gear is as follows:

Shackle — Length, 28 fathoms; depth when fishing, 3.5 to 4 fathoms.

Leadline — Is suspended about 4′ below the selvage, with hangings spaced about 3′ apart. This suspension of the leadline below the web is essential in a high seas gillnet, as this prevents much of the tendency of the net to roll-up.

Web — Amilan (nylon) twine, 210 D, 3-ply, 18 to 250 D, 4-ply, 16. Meshes deep, average of 60. Hung-in to give 750 meshes on the average per 28-fathom shackle.

Mesh size — Minimum permissible mesh size since 1958 for operation in the Aleutian area is 120 mm. stretched measure (approximately 4-15/16″). Note that introduction of 130 mm. (approximately 5-5/16″) on a token basis is provided for this season, with increase to 25% of the total next year.

"EMBARGO"

The Factless Argument of Invective

• *"Embargo"* was the principal charge of the opponents of the Magnuson-Pelly Bills before the Senate Committee on Interstate and Foreign Commerce.

The bills seek to accept in the United States market salmon caught on the high seas only when the place and manner of its catching is not inimical to conservation or destructive of salmon resources originating in the United States.

• *"Embargo"* is the argument of invective, not of fact or logic.

Does one shout *"Embargo"* at the provisions of the Food and Drug Act when they require that only sound and sanitary food may be exported to the United States?

Is it *"Embargo"* to require that foods entering the United States be not considered in that market as unwholesome, esthetically offensive, or produced under improper conditions, even though such foods may be quite acceptable in their country of origin?

If not, then is it *"Embargo"* to require that a food—canned salmon—entering the United States be not produced under conditions and methods destructive of a great natural resource which American nationals have used and conserved for almost a century?

• *"Embargo"* is the argument of invective, the refuge of the factless and illogical.

State and Interior Split U.S. Stand on Salmon-Saving Bills

• State and Interior stand apart in the government of the United States when it comes to the question of seeking to prevent destruction of the Red salmon resource of Alaska by excluding from the United States markets salmon caught on the high seas at times and places where the fishing bears destructively upon a salmon resource propagated in American territory.

This was made plain in the Congressional hearing on bills to provide this protection by restricting markets to fish produced in conformity with conservation principles.

Speaking for State, W. T. M. Beale, acting assistant secretary for economic affairs, denounced the bills as "basically inconsistent with the United States policy supporting liberal trade policies," and closed with these words: "The Department of State therefore believes that over-all United States interests will best be served by continued discussion of this problem through appropriate channels."

• Interior's official position held: "The Japanese high seas gillnet fishery poses a grave threat to our important fishery for Red salmon in Alaska" . . . "unless the pattern of this high seas fishery is changed abruptly, it may destroy the commercial value of the Red salmon runs." . . . It went on to say there "may be no alternative to the enactment of legislation of this type if the Alaska salmon industry is to be preserved."

Royal Toner Dies

Royal Toner, for many years a leading figure in the American oyster business, and in 1952 president of the National Fisheries Institute, died in New York City May 15 after an illness of several months.

Passing of Mr. Toner is felt deeply by many figures throughout the American fisheries, to which he made an immensely valuable contribution of time and intelligent leadership.

Tuna Fishermen Struggle To Keep Floor Under Price

● Southern California's tuna industry late in May was completely snarled up by a stubborn problem of price. What's more, as this is written, there is no sign of a solution as both fishermen and canners contend they cannot operate at the other's offered prices. The result of the wrangle at time of writing was that about 25 purse seiners were tied up at San Pedro, and nine or 10 clippers in San Diego.

In San Diego, the fish refrigerated in the idle clippers were slowly being sold off by a sort of continuous auction, prices dropping to the lowest since auctions began in August, 1957.

Latest auction prices were $240 a ton for Yellowfin and $200 a ton for Skipjack, which is $30 below the floor laid down under the union's demands. Nevertheless, it was understood the union men were not being paid the floor price out of the vessel owners' pockets but on a straight share based on the price actually received for the fish.

Seagoing Picket Boats

● In San Pedro, the situation developed to the point of physical action, though without violence. For a couple of days the unloading docks were blockaded or picketed by San Pedro-based purse seiners which tied up at the docks, making it impossible for San Diego clippers to unload the fares they had sold to the canners at lower auction prices.

However, after a day or two of this style of marine picketing, the blockading vessels were peaceably withdrawn.

San Pedro purse seiners were sticking solidly to their position of not selling for under $270 and $230.

The reason for the price weakness seemed to be an oversupply of fish, all the way from the housewife's pantry shelves to the ocean itself.

Canners said there was plenty of fish around, whether the fleets sold any or not.

Imports showed their highest levels in five years at this date, with 30,646 tons total California imports from January 1 to May 9, 1959. Compared with last year's total to the same date of 20,215, you get an increase in 1959 over last year (year to date) of 10,431 tons or over 50%. These are all U. S. Fish & Wildlife Service Market News Report figures.

The previous high for imports to this date was in 1955 when the January 1 to May 9 figure was 22,275 tons imported from California.

Seiners Beat Record

● Also contributing to the plentiful supply of fish is the record hung up by San Pedro purse seiners.

This year, between January 1 and May 9, the net boats had caught a total of 16,137 tons. Last year the figure was 12,303. So the seiners caught 31% more fish this year up to May 9 than last. The 1957 figure, by the way, was 8,201 tons, so for the first few weeks of the year, the seiners have just about doubled their take of that season.

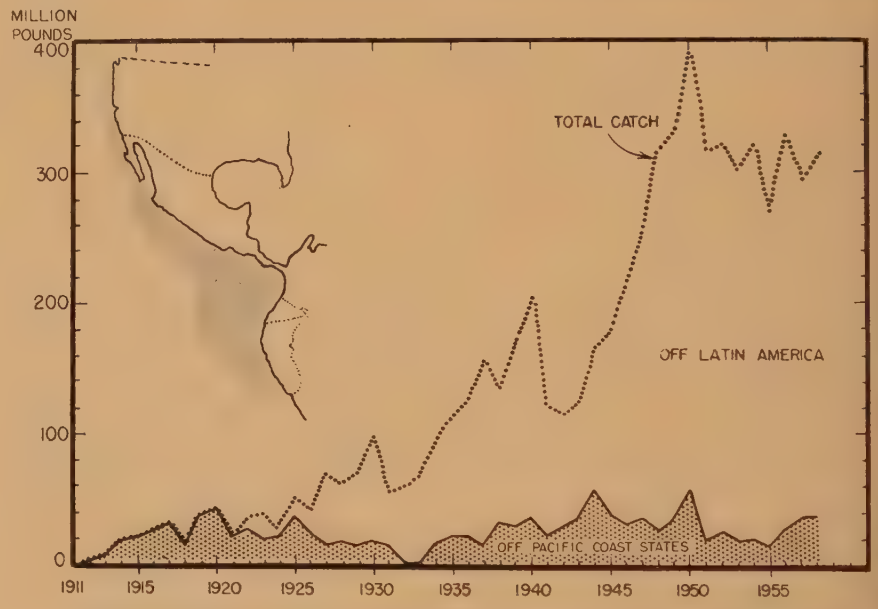
Add to this generous supply of fish the fact that right after Lent sales of canned fish are usually slow, and you have a situation causing strong downward pressure on prices, as the economists put it.

Canners' inventories were said, on good authority, to be high.

Early Pack Up 29%

● Unofficial reports from Washington said the U. S. tuna pack for the first three months of 1959 would run 29% higher than last year, the estimated total being given as 3,700,000 cases.

CATCH OF TUNA OFF THE PACIFIC COAST STATES AND LATIN AMERICA, 1911 - 1958



—Graph and data by Branch of Statistics, U. S. Bureau of Commercial Fisheries

Southern California Domestic Tuna Deliveries

Cumulative totals for 1959 through May 16, in tons, as reported by U. S. Market News Service

	Albacore	Bluefin	Skipjack	Yellowfin	Bonito, etc.	Total
Clippers and Albacore Fleet		16	16,716	13,075	3	29,810
Purse Seiners		1,990	2,543	14,808	110	18,982
Total 1959 through May 16		2,006	18,790	27,883	113	48,792
Total 1958	4	1,588	19,182	28,101	239	49,180
Total 1957	221	104	13,631	31,564	66	45,365

This high pack would, of course, ave a tendency to push prices down. obbyists for the Japanese tuna indus- y, also speaking in Washington, said at even if the prices showed signs f softening, the Japanese would not e the first to lower the price.

On another subject, the spokesman the U. S. for the Japanese tuna in- ustry, Raymond Steele, was quoted s saying that if imports into the U. S. f tuna loins from Cuba were hurting ne U. S. tuna industry, the Japanese ould stop delivering raw tuna to uba.

This was said to be a friendship esture from the Japanese industry the American tuna industry. Im- orts of tuna into the U. S., however, ostly from Japan, nevertheless were alf-again higher between January 1 nd May 9, 1959, for the same period f 1958.

igger Bluefin Catch

U. S. Fish & Wildlife Service fig- res show an increasing catch of Blue- in, which canners were not particu- arly anxious to buy because the fish often discolored, which makes it ess attractive, though no less tasty.

Bluefin catch for all of California rom January 1 to May 9, 1959, were, ccording to USFWS, 1,989 tons as gainst 1,287 tons for the same period ast year and 104 tons for the same eriod of 1957.

Nearly all this Bluefin was caught y the San Pedro-based purse seiner leet.

Among the most notable fishing chievements in the early season was he record made by the newly-conver- ed purse seiner *Southern Pacific,* com- nanded by Lou Brito, which in mid- May had returned from her fifth fish- ng trip. She was said to have brought n an average of well over 200 tons er trip.

San Diego auction prices, as re- orted by the USFWS, showed the lownward trend.

During April, prices held up pretty vell at $265 per ton base and $270 er ton for premium fish, for Yellow- in; and $220 base and $230 premium or Skipjack. At the end of the first veek in May the prices had slid to $260-$270 for Yellowfin and $200- $210 for Skipjack. Late in the month, ishermen were asking $240 for Yel- owfin and $200 for Skipjack.

Mackerel Showing Life?

The California mackerel and an- chovy fishery, which has been in a leep coma for over a year, continued veak, although the total of Pacific nackerel caught between January 1 nd May 13, 1959 was reported by he Fish & Wildlife Service to be over the same period total for 1958— 2,159 tons in 1959, 1,326 tons for 1958.

Pacific mackerel, however, was way down, and anchovies virtually invisible, so the totals for these varieties of fish caught between January 1 and May 13, 1959 was only 3,789, compared with 5,705 tons for the same period last year.

The prices of fresh-frozen shrimp were down under last year's, according to the Market News Report; but retail prices, at least in the Southern California area, were not noticeably lower, and shrimp was not moving too briskly.

Southern California wholesalers and brokers were not specially happy over this condition, especially when they scouted around and picked up some rather substandard samples at random from some retail stores.

It was the old complaint—retailers slipping up on proper refrigeration of frozen fish items, then selling substandard fish re-frozen in the market cases. Thoughtful wholesalers and brokers felt that a closer understanding with retailers—especially the big chains which sell the bulk of seafoods —might help to solve this situation. Some brokers and wholesalers are actively undertaking to do something about this, by working more closely and talking candidly to key retail executives.

"Political Shift" is Key In Japan's Tuna Troubles

Japan's tuna business has its troubles also.

This became particularly apparent the middle of May when the Japan Tuna and Bonito Fisheries Cooperative Associations and the Federation of Japan Tuna Fisheries Operators Associations held their annual meetings.

They came at a time when ports such as Yaizu were burning with impatience at the total failure of the Albacore fishing to that time. Skipjack fishing was developing favorably, but the water temperatures were believed to keep the Albacore too deep for surface fishing methods used at this time of year.

Commanding problem of the present concerns the "political shift" entered into by the government in permitting the salmon vessels displaced from their normal trade by the 1959 fishing agreement with the Soviet Union to enter the tuna fisheries.

Demand for this entry into the tuna fishery was made by the Hokkaido Fishery Operators Association, which also sought entry into the tuna operators federation.

With Japan's newspapers noisily denouncing the deal with Russia, and the displaced salmon boats demanding somewhere to go, the national government indicated that shift of the salmon vessels into the tuna business was "inevitable."

Tuna Federation directors didn't want this, and roundly condemned the "political shift", which they said "could not be recognized because it would destroy Japan's tuna industry at large."

Tuna Federation program in general provided these objectives:

a. Promotion of the export trade and domestic consumption of tuna;
b. Movement to improve the statutory system for management of fisheries;
c. Improvement of advanced overseas bases.
d. Increased labor productivity.
e. Cooperation in international fisheries. (Meaning of this point is not altogether clear. It could mean cooperation with other nations in the conservation and use of high seas fisheries; or perhaps assistance for coastal nations in development of their fisheries through Japanese technical training and assistance.)

California Imports of Frozen Tuna

Cumulative data in tons for 1959 through May 16, and for other years to the nearest comparable date. Data from U. S. Market News Service

	Albacore	Skipjack	Yellowfin	Unclassified	Total
San Francisco	319	151	3,353		3,823
San Pedro	6,296	2,911	16,128	21	25,356
San Diego	713	203	2,357		3,273
Total to May 16	7,328	3,265	21,838	21	32,452
1958	6,355	1,544	14,035	84	22,018
1957	9,028	4,840	8,899	102	22,869

U.S. Fisheries Research in Alaska will have its center in this new laboratory at Auke Bay, near Juneau after control of fisheries and most of the present federal facilities are surrendered to the state. John T. Gharrett, Alaska regional director of the Bureau of Commercial Fisheries, announces award of a contract in the sum of $406,647. Construction is expected to be complete in the summer of 1960.

What the Salmon Industry Needs this Year

Courage Plus Luck

• Alaska salmon operations get under way this month on a new course through uncharted waters strewn with reefs, masked by the fog of uncertainties, and lashed by Takus and williwaws.

Canneries which have packed fish for more than 50 years are closed for the first time this season on Bristol Bay.

Operators who have fished with traps since they were boys will be without them this season.

Active canneries will approximate 40.

There have not been fewer in any year since 1899.

As short a time ago as 1948 there were 120 canneries active in Alaska. The all-time high was in 1929 when the count was 159.

Even in depression years there were 84 in 1931; and 87 in 1932.

Granted that today's canneries are bigger and faster, *far* faster; and that chilled seawater and quality-protecting handling methods permit them to operate more effectively. Granted also that few of the 40 canneries will be operated by only one company; and that as many as five firms may be concerned in a consolidated operation.

A Time for Technology

• The industry is meeting its problems technically.

Technology cannot produce salmon which have already been caught on the high seas, where Americans are forbidden to fish; but perhaps it can handle them more effectively than in the past, and at lower cost.

It takes courage to operate this year, but it takes courage to *be* in the fish business. This year is differently mainly in that it takes *more* courage; and a bit of luck will help.

Abolishment of traps, which at presstime seemed certain to be wholly effective, save for the 11 traps permitted the Indians by Secretary of the Interior Seaton, came much quicker than most observers deemed possible.

The long-standing legal opinions under which Secretaries of the Interior for decades have declared they had no authority to prohibit traps melted away like ice under salt when brought before the Court of Appeals.

How to catch the fish without traps was a problem concerning every canner in the business, whether he lost traps or not. The packer who has been operating on fish from mobile gear has his problems also—the problem of protecting his fleet against the raids, enticements and inducements of his competitors. (There's a technique in this as well as in cannery operation.)

Under these conditions the problem of cost becomes vital, for in competing for fish men make bids and under-the-counter deals without consulting their sales manager and accountants.

Competition for fish can be par-

cularly risky in case a big run de-elops — but no one considers *that* uch of a risk this year.

rst Fishing Not Encouraging

Only Copper River was open to shing at presstime of this issue; and arly production was light. This, how-ver, was not unexpected, as volume arely appears on the Copper until ell into June. There is no expectation f an above-average run this year.

Columbia River fishing in the early eason—which closed May 27—rank-d with the poorest on record, and ertainly was short of the two pre-eding years.

Gear was harvesting 47% of the otal run.

uget Pink Run in Question

Research staff of the International almon Commission reported early in ne spring that the prospect for the iennial Pink run this season was poor ndeed.

Recent studies have disclosed noth-ng to cause modification of this expec-ation.

The poor prospect for southern British Columbia and Puget Sound Pinks traces to the high-above-normal vater temperatures in the Gulf of Georgia in the spring of 1958 when he migrants which will return this ummer first reached salt water. Scien-ists find an inverse relationship be-ween high sea water temperature at he time of the seaward migration of Pinks and the adult return in the fol-owing year.

If the researchers' worst fears are fulfilled, it could be that fishing of the run of Fraser River Pinks would have to be closely restricted in order to provide a resource - protecting escapement.

Alaska Cannery Line-up —

● Operating line-up of Alaska salmon canneries was taking definite form at the end of May, but could not yet be considered firm. While most of the plants which would be active were identified, the consolidation complex in them all was not apparent.

Prospective operations at presstime were:

YUKON RIVER—

St. Mary's, St. Mary's Mission: *Alakanuk,* Yukon River Fishermen's Cooperative.

BRISTOL BAY—

Dillingham, Pacific American Fisheries and New England Fish Co.; *Ekuk,* Wards Cove Packing Co., Alaska Packers Association, and Columbia River Packers Association; *Alaska Queen,* floating, Queen Fisheries and Nakat Packing Corporation; *Naknek,* Red Salmon Cannery; *Egegik,* Alaska Packers Association, Egegik Packing Co., and others.

PENINSULA—

Port Moller, Pacific American Fisheries; *False Pass,* P. E. Harris Co.; *King Cove,* Pacific American Fisheries, New England Fish Co.; Alaska Packers Association and Chignik Fisheries Co.

KODIAK ISLAND—

Alitak, Pacific American Fisheries and Alaska Packers Association; *Uganik* and *Shearwater Bay,* San Juan Fishing & Packing Co., Kadiak Fisheries Co., Oukinzkie Packing Co., Washington Fish & Oyster Co.; *Uyak* and *Kodiak,* Parks Canning Co., Alaska Packers Association, Halferty Canneries, Inc.

COOK INLET—

Anchorage, Emard Packing Co.; *Ninilchik,* Berman Packing Co.; *Snug Harbor,* Snug Harbor Packing Co.; *Kenai,* Kenai Packers; *Port Graham,* Alaska Year Round Canneries, Fidalgo Island Packing Co. and Whitney & Co., *Portlock,* Port Chatham Packing Co.

COPPER RIVER—

Cordova, Western Fisheries Co., New England Fish Co., Halferty Canneries, Inc.; *Cordova,* Copper River Co-op Co.

SOUTHEAST ALASKA—

Pelican, Pelican Packing Co.; *Excursion Inlet,* Excursion Inlet Packing Co.; *Haines,* Haines Packing Co.; *Hawk Inlet,* P. E. Harris Co.; *Chatham,* New England Fish Co.; *Hood Bay,* Hood Bay Salmon Co.; *Kake,* Whiz Fish Products Co.; *Petersburg,* Pacific American Fisheries; *Petersburg,* Petersburg Processors, Inc. and Petersburg Seafoods, Inc.; *Petersburg,* Kayler-Dahl Fish Co. and Whitney & Co.; *Juneau,* Halferty Canneries, Inc.; *Klawock,* Klawock Oceanside Packing Co.; *Hydaburg,* Hydaburg Cooperative Association (stand-by basis); *Metlakatla,* Annette Island Canning Co.; *Waterfall,* Nakat Packing Corporation and several other companies; *Ketchikan,* New England Fish Co.; *Ketchikan,* Wards Cove Packing Co., each of the latter two with several other companies consolidated.

Refrigerated Sea Water Conversions Mark a Trend

Typical of the measures being taken by salmon canning companies as they seek to cope with crowding costs by consolidated operations served by refrigerated facilities for handling fish is the equipment of the 88′ power scow *Bering* for the New England Fish Co. The work was done at the Maritime Shipyards, Seattle.

Bering was built originally for military transportation of fuel and supplies, and so had six large fuel cargo tanks in her hold. These could be removed by taking out the forward deck. Then there was room to install piping for the chilled seawater system, recessed into the hold, allowing deeper space for the steel-plywood-built tanks, which are insulated with Dow Styrofoam. Two GM 2-cylinder diesels, for circulation pumping and refrigeration compression, were installed on the deck forward of these tanks, with a watertight housing. The tanks themselves are coated with tar above insulation.

Other vessels similarly rebuilt with the *Chirikof,* a steel vessel with complete new steel tank in her fish hold and new Superior diesel for the seawater circulation; *Balena,* formerly the 105′ *Jimbo,* Alaska Packers, and 105′ *Logger* for San Juan Fishing & Packing Co., the latter having been done this spring along with the *Bering.* The other two were converted last year.

A fifth such conversion by Maritime is the 95′ cannery tender *Alma* on which work is in progress at this writing, for Kayler-Dahl Fish Co.

More of these conversions have been done by other yards in the northwest,

Japan Freezing Trawler Working North Bering Sea

Japan is mounting an ambitious packaged frozen fish project for northwestern Bering Sea in the general area of Cape Oliutorskii on the Siberian coast. Dispatched May 16 from Hakodate was the 1,000-ton freezership *Ikema Maru* of Nippon Suisan K. K. She is about twice the size of the vessel operated in a similar project in the same area in 1958.

She will trawl King crab, herring, codfish and will pack all except the herring in 100,000 master cases. The herring will be salted.

All cod and similar fish will be filleted and the King crab frozen. The vessel has no canning facilities, and will be due back in Japan early in September.

U. S. B. C. F. and Tuna Industry Swap Programs for Progress

● The entire United States Pacific tuna industry—fishermen, labor leaders, boat owners, cannery production men, marketing experts and operators, plus the U. S. Bureau of Commercial Fisheries — sat down in private for three solid days last month and looked itself over.

This closed door gathering billed as a Government-Industry Tuna meeting, was held at the Scripps Institute of Oceanography, La Jolla, Calif., with about 95 representatives of all segments of the industry present. Chairman was Donald L. McKernan, director of the U. S. Bureau of Commercial Fisheries.

The purpose of the assembly was generally to improve the condition of the industry, but since the meeting was called by the Bureau of Commercial Fisheries, discussions were limited to those avenues of improvement in which the Bureau could move. This excluded foreign affairs and prices.

So, although the event took place at a time of high crisis in the industry, in which virtually the entire fleet was tied up by a price dispute, the delegates did not deal with that subject, or, what causes price disputes, and how they can be settled.

Two Programs Submitted

● The Bureau brought to the meeting an agenda of subjects to be discussed, ranging all the way from oceanography to the financing of boat building. The industry also had a program which it requested the Bureau to put into effect as soon as possible.

Very briefly, some of the highlights of the discussions were:

Fishing: The Yellowfin fishery is increasing in all parts of the world, in the U. S. and West Africa, more slowly than elsewhere.

There is a body of information on the habits and movements of the Yellowfin, but up to now it has not been published in a form that could be useful to fishermen. The Bureau can undertake to co-ordinate and make available this information, and fishermen could probably save trip time by taking advantage of it.

Quality Control: The quality of fish delivered at the dock depends a lot on how it is handled aboard the boat. Studies have been and are being made on refrigeration methods and handling, but more research is necessary.

By-Products: In the meat industry, by-products account for a share of profits far higher in proportion to the tonnage sold than does meat itself. If the tuna industry took greater advantage of its opportunity in the high-priced by-products industries, the profit picture might show considerable improvement.

Exports: The use of tuna in foreign countries is increasing rapidly. Italy, the United Kingdom, West Germany, Belgium and other nations now are using more tuna than they ever did before. There might be opportunities for American exports to some of those nations. As of now, a very small percentage of the U. S. pack is exported. More salmon than tuna, in fact, is exported.

The Japanese: W. G. Van Campen, fisheries attache of the U. S. Embassy to Japan, came all the way from Tokyo to give the delegates a picture of the Japanese industry and the Japanese fishermen as people.

Young Japanese are anxious to become fishermen because such as they are, the opportunities aboard ship are greater than those in industry ashore.

The Japanese are interested in U. S. fishing methods and equipment. The Japanese Government is interested in maintaining the tuna industry and will come to its rescue if and when it is threatened.

There is little if any Government aid being given to builders of fishing boats at present in Japan. Most building is being done by private capital. The Government seems to be trying to slow down the tuna industry, holding expansion to a slower rate. All new boats built are theoretically replacements, not additions to the fleet.

Although the Japanese fishing industry, like any industry, has problems, it must not be underestimated. The Japanese look upon themselves as a fishing nation, and the industry has a lot of vitality.

Industry Program

● The industry program, which was backed up in writing by labor, co-operatives, independent canners and other segments, came in for some discussion at the meeting.

The program covered 40 pages of mimeographed material, and pulled no punches. It suggested that the bureau undertake research and work along these lines, among others:

Information: Translating foreign fishery information, correlating and publishing information already available from other agencies.

Fish Behavior: It is recommended that studies be made to find out what causes changes in the availability of tuna — separate studies for Albacore and Bluefin in the more northerly waters, and for Yellowfin and Skipjack in warmer waters.

Bait: Studies could be undertaken on the keeping qualities of bait fishes; also on substitute baits.

Quality Control: Studies to improve the handling of fish aboard fishing vessels.

Marketing: The program said it thought the Government should generally speaking stay out of the marketing business except for basic research. Some marketing services now maintained could be eliminated.

Liaison: The bureau could work with other Government agencies on such matters as establishing loran stations and keeping harmony with the military in zones where fishermen and the Navy both have interests.

Fisheries Scientist To Study in Russia

Donald E. Bevan, 38, for a number of years Fisheries Research Institute project leader for Kodiak Island and Pink salmon investigations, is one of 35 advanced students selected by the Inter-University Committee on Travel Grants for study in the Soviet Union under a program sponsored by the U. S. Department of State.

Mr. Bevan, who is expected to receive the degree of Doctor of Philosophy shortly, is a Seattle man and graduate of the University of Washington.

Clarence Anderson Continues to Head Alaska's Fisheries

CLARENCE ANDERSON

Clarence L. Anderson, director of le Alaska Department of Fish and ame from its organization as an gency of the Territory of Alaska in 949, is Commissioner of the State Alaska's new Commission of Fish nd Game. He was appointed by Gov- nor William Egan from a list of seven ominees submitted by the Fish and ame Board.

Under the state's new law, the board onsists of eight members, appointed y the governor, subject to confirma- on by the legislature. Their terms are aggered, and board members may be emoved only for cause.

The board has authority to make ules and regulations, and to establish olicies for fish and game research, anagement, enforcement, propaga- on and stocking, investigation, and ontrol of predators. For purposes of dministering its rules and regulations, he board may delegate authority to he commissioner.

Under this authority the commis- oner may summarily open or close easons or areas, or change weekly losed periods by field announcement.

Provisions of the new Alaska law ffecting fisheries include:

1. *Advisory Committees*: To be es- ablished by the board in such places s it may designate; to be composed f persons well acquainted with the ish and game resources of the locality.

2. *Wanton Waste*: It is unlawful or any person wantonly to waste or nnecessarily destroy any fish or game.

3. *Fishways or Hatcheries*: Every am or obstruction shall be provided vith a durable and efficient fishway r, in the event such is considered im- racticable, provision must be made for hatchery, or for other suitable com- ensation. (There is no such provision n the present Federal law.)

4. *Other hydraulic projects*: Plans nd specifications must be approved y the commissioner before construc- ion is commenced. (Here again there s no such Federal requirement.)

5. *Enforcement*: Ample enforce- nent authority is authorized and pro- ision made for mandatory forfeiture f a person's commercial fishing li- ense upon third conviction of viola- ion pertaining to commercial fisheries.

• License schedule for commercial fishing becomes effective Jan. 1, 1960, and in general provides that the non-resident fee shall be three times that charged for residents, save in the case of the personal commercial fishing license, where the Alaska resident will pay $10 and the non-resident $15.

The vessel license is $10 and $30. Gear license fees are all triple-charge for non-residents, with the resident base rates as follows:

Troll line, $15; set or long line, $25;

Drift gillnet, first 100 fathoms, $10; additional 50 fathoms, each, $5;

Beach or drag seine, first 100 fathoms, $10; additional 50 fathoms, each, $5;

Set or stake gill net, first 50 fathoms, $5; additional 50 fathoms, each, $5;

Purse seine, first 100 fathoms, $40; additional 50 fathoms, each, $10;

Beam trawl, $37.50; Otter trawl, $50;

Shellfish pots, each 100 or less, $15; Clam digging, $5.

Prohibitions provided by specific law forbid fishing in Alaska waters by means of traps or drum seines; and prohibit the taking of herring spawn for commercial purposes.

Van Camp Suspends San Diego Canning

Van Camp Sea Food Co. last month announced the closing down of its canning operation in San Diego, Calif.

This leaves Westgate-California the only tuna cannery operating in the border city, which is still the home port of vessels catching the major portion of U.S.-caught tuna.

Although the cannery has suspended operations, Van Camp will continue to unload Albacore in season at its San Diego dock. Albacore will be trucked to Los Angeles for canning.

Supervisory personnel and cannery executives, it was said, will be moved to Terminal Island.

The Van Camp San Diego operation had been functioning for more than 50 years. It was closed before for a time, then reopened.

Bering Sea Reduction Resumed by Japanese

Kinyo Maru, the 9,634-ton factoryship of Hokuyo Suisan K.K., was back on the Bering Sea grounds again in May for her second year of operation in the reduction of bottom fish, plus the filleting and freezing of some choice varieties.

She is scheduled to remain in the eastern Bering Sea for a period of five months, returning to Japan early in October.

Her production target for this year calls for 13,500 tons of fish meal; 400 tons of fish liver oil; 2,300 tons of condensed fish solubles; 800 tons of fish oil; and 4,250 tons of frozen fish.

Kinyo Maru is served by a fleet of trawlers, but the number has not been made public.

Tuna Longlining on Trial To Supply Peruvian Plant

• Long-line tuna fishing, which is successfully practiced by Japanese fishermen in many parts of the world, is under experiment by an American company in Peru.

Frigorificos Paita, SA, or *Fripsa* for short, a company affiliated with Westgate-California of San Diego, is fishing long-line out of Paita, Peru, on an experimental basis.

The vessel used is the *Talisman,* formerly a tuna clipper fishing out of San Diego, now renovated throughout and converted to long-line fishing. She is 78′ long, commanded by Sven Johanssen. She carries a capacity load of 20 tons at zero fahrenheit.

According to John Day, *Fripsa* general manager, the *Talisman* has fished one season, with fair success. While the quantity of the catch has not been spectacular, the quality of the fish is first class, Mr. Day said.

At present *Talisman* is working 35 baskets, on about 400 fathoms of line per basket for a total of about three miles per set. This is a small-scale long-line fishing, but Mr. Day says that before enlarging the scope of operations, much has to be learned about the fishery: where the fish are, what depths yield the best catches, what seasonal movements (if any) the fish make.

Talisman's experience so far, Mr. Day said, indicates to him that the fishing is there if the technical knowledge of long-line fishing, and the information on the fish and its habits, can be developed to the point of profitable production.

Talisman is equipped for dry sharp-freezing on board. The fish is filleted on board as caught, and the sharp-frozen loins are brought into port for delivery to the canneries.

The vessel now makes trips of about a week's duration, carrying food and water supplies for not much longer than that period. However, if the fishery shows promise, trips may be stretched to 14 days. The freezing equipment on board will handle up to two tons per day of loins, Mr. Day said.

The Fripsa plant at Paita, Peru, has expanded its sharp-freezing capacity to about 100 tons—an increase of about 100%—Mr. Day, manager, told *Pacific Fisherman.*

The cannery crew built the new direct-expansion plate freezers, Mr. Day said. At the same time, cannery equipment was improved and modernized with the result that the equivalent of about half a canning line was added to the plant's capacity.

A Carruthers Pak Shaper was modified to make 20-inch cylinders of tuna loins from fish caught in Peruvian waters. These cylinders are encased in plastic containers, frozen hard, and shipped frozen to the Westgate-California cannery in San Diego, Calif.

The entire Paita operation, Mr. Day said, is expanding, with more boats being added to the fleet as well as more capacity to the cannery and freezing plant.

7 Significant Points About—

Pet Food Packing in Japan

• Pet food produced from fish and canned for the United States market is exerting a marked effect on several facets of the Japanese fishery economy.

First—The product offers a new source for increasing the economic recovery from the gross fish catch by raising through manufacture the value of otherwise low-price material.

Second—The pet food goes to the export market, selling foreign for much-sought exchange, material which otherwise would be utilized domestically, and at a lower level of economic return.

Third—This diversion of red meat tuna to pet food for export is having an effect on the supply of tuna flakes canned in soy sauce for the domestic trade. While the use of dark meat for pet food is the prime reason for this domestic shortage of flakes-in-soy, the reduced canning of Albacore in brine contributes to the effect, as this trade normally is the principal source of the material for the soy specialty.

Fourth—Future packs of pet food packed from fish in Japan will be fortified with Vitamin E to supply the dietary deficiency which has been detected in the United States as resulting in cats whose diet is primarily the red meat of tuna. Japanese packers thus far has been using imported Vitamin E, but will soon have a domestic supply available.

Fifth—If the supply of material suffices, informed observers believe that the 1959 pack of fish-based pet food in Japan will attain 500,000 cases this year. (Presumably this is on the basis of 48 halves per case.)

Sixth—Use of saury for packing pet food for export is being considered by some packers who have their technological departments studying the matter. This species during the fall months sometimes is available in such quantities that not all of it can be utilized for food. Large amounts are sold fresh; some are frozen; and a substantial volume is used for canning after the manner of California sardines in oval and tall cans; but much of it is dried in primitive manner for fertilizer. (NOTE—Saury is a species related to the mackerels, although smaller than the Pacific mackerel, and has similar characteristics of flesh and flavor. It is perhaps significant that the largest-selling cat food in the United States is based primarily upon whole mackerel.)

Seventh—Japanese salmon canners this year are expected to utilize a portion of the edible waste from the canning process as the base for canned pet food.

Japanese Explorer Locates Atlantic Tuna Grounds

• Exploratory vessel *Shoyo Maru* of the Japanese Fishery Agency's investigation fleet returned to Japan late in the spring from a voyage which began Nov. 15, 1958, and took her over the Red Sea, the Mediterranean Sea and the Eastern Atlantic Ocean.

The vessel logged 28,500 nautical miles in her 4.5 months of fishery investigation.

In her Atlantic explorations, *Shoyo Maru* located an excellent Big-Eye tuna ground in the vicinity of 12° North Latitude, 22° West Longitude. A good Albacore area was also found in the vicinity of 36° North and 15° West.

Shoyo Maru carried out an investigation of trawling in the Mediterranean and of long-lining in the Red Sea under an assignment from the government of the United Arab Republic.

The operations in the Red Sea did not give much encouragement as to the development of a tuna fishery there. From a series of six operations, only 14 small Big-Eye tuna and one small marlin were taken, beside 7 commercially useless fish.

PACIFIC FISHERMAN'S NEWS

JUNE 1959

ANTIBIOTICS—

A Challenge to Responsibility

• Clearance of the antibiotic chlortetracycline—*Acronize*—for use on whole, headed or dressed fish, provides a rich growth potential for North American fisheries. It opens new horizons of opportunity to the fisherman, the fresh fish shipper, the freezer, the canner, *and the consumer.*

The benefit is proven; the opportunity is present—

But they can be lost by carelessness, thrown away by stupidity and greed.

• Antibiotics are not a substitute for refrigeration and sanitary practices.

Properly used, they can extend the high-quality period of well-cared-for, thoroughly refrigerated fish; and thus can benefit the men who make the catch, who distribute the fish, who freeze it, or who can it; and the ultimate consumer, who gets better fish and is willing to pay for it.

Improperly used, they can destroy a priceless opportunity, not only for the man who commits the fault, but for a world-wide industry.

Here is a challenge to responsibility. In approving the use of Acronize on fish, the U. S. Food and Drug Administration is imposing a special trust in fishermen and the industry which sells their catch.

• What is improper use of this antibiotic?

For the fishermen to extend his trip materially beyond the time that he can normally protect the quality of his fish by his refrigeration method, be it ice or chilled sea water, and in the latter case to use more than the prescribed amount of antibiotic in his refrigeration system;

For the processor to substitute Acronize for proper sanitation, cleanliness and refrigeration;

For the distributor to use the antibiotic in an effort to sell under the protection of its name goods already of inferior quality.

• Bluntly, the benefit from the use of Acronize lies in the opportunity it offers to sell *better* fish, not *older* fish.

Japan's Aleutian Whaling Target Sharply Reduced

Japan's Aleutian area whaling operations this season will seek 1,800 whales, 1,000 of them sperms, instead of the 3,255 whales killed there this year.

The *Kyokuyo Maru,* 11,448-ton factoryship has a target of 800 whalebone species and 200 sperms during her season ending September 19. *Kinjo Maru* will seek 800 sperms only, and is due back August 1.

1st at Ft. Bragg

William Murray, Fort Bragg, chartered the troller *Falcon* and brought in what is thought to be the first salmon of the season at Noyo to F. Alioto Fish Co. Mr. Murray has chartered his smaller boat. Mr. Murray recently equipped *Falcon* with an Apelco radio telephone, purchased from the Noyo Store, Noyo Harbor, Fort Bragg.

"Cape Cleare" Is Sold For Tuna Seining

The 87' herring seiner *Cape Cleare,* Barney Iversen, managing owner, was sold in May to John J. Evich of San Pedro, present owner of the California seiner *Clermont.*

Cape Cleare was built in 1948 and carries a 330-hp. diesel. She has been one of the notable vessels of the Southeast Alaska herring fleet for 10 years. Plans of her owners are said to be to refrigerate her for tuna seining.

Thomas Bagalini Succumbs

Thomas A. Bagalini of San Diego, retired fisherman, who had lived in San Diego 45 years, died in that city in May, at the age of 76. He was a member of the Lower California Fisheries Assn., a league of San Diego clipper owners, and a well-known figure among old-timers in the tuna industry. Besides his widow he leaves two sons and two daughters.

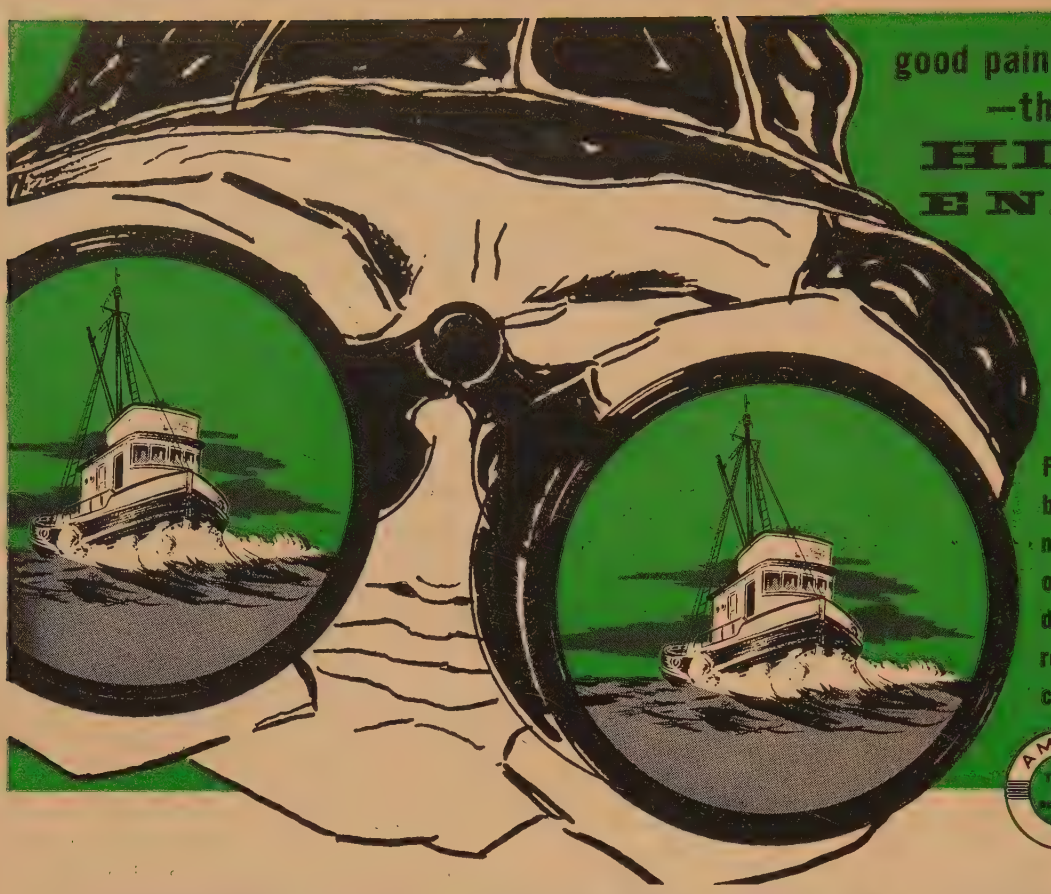
North Calif. Crabbing Season Best Ever

Fort Bragg and Eureka reported one of the biggest crab seasons ever. At Fort Bragg some 800,000-lbs. were landed, with a large portion of that in January and February. At Fort Bragg it was reported that crab fishing fell off in April.

About 4,500,000-lbs. of crabs were landed in Crescent City, and about 4,000,000-lbs. in Eureka. Prices to fishermen in all areas ranged from 14 to 17c per lb.

"Oceanic" Almost Sinks

An alert, observant housewife saved the big herring seiner *Oceanic* from sinking in Lake Union, Seattle, in April. Mrs. Peter Hansen, looking from her home early in the morning, noticed the *Oceanic* was riding very low at the moorings of the Oceanic Fisheries Co. She telephoned the Seattle Harbor Patrol, which found the craft with decks awash.



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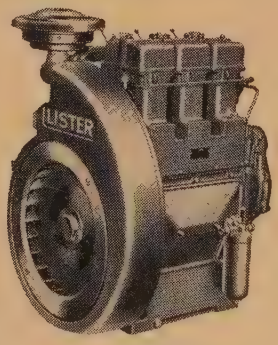

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Large Halibut Command Good Premium on Market

• Westward halibut grounds were running well ahead of 1958 to the end of May, but the local banks were a million or more pounds behind.

This condition arose from the tendency of more vessels to fish to Westward during the early season, favoring the grounds with the special season and the big fish over those where the catch rate was less and the fish averaging smaller.

• Large halibut were at a premium on the market this spring, carrying out the tendency of former seasons. Statistically the large fish price preference was particularly notable in Seattle, due to the establishment there of the three-grade system which permitted buyers to bid what they thought the large fish were worth without having to take chickens at the same price.

Mediums and chickens both showed a sharp price decline in May from the level of a year before—a tendency which is believed to reflect the generally easier tendency of food prices, and one particularly evident in fish.

The average size of fares of Area 2 vessels in the Seattle fleet was the same as in 1958; for the Prince Rupert Canadian fleet, the average was about 5% smaller; for the Southeastern Alaska fleet the fares averaged about 25% larger than in 1958.

Landings to May 20 from Area 3A, Cape Spencer to Shumigan Islands, totaled approximately 6,000,000 pounds. Including estimates for the first fares yet to be landed, the total for the first round from Area 3A is expected to be 7,500,000 pounds compared to 5,000,000 pounds for the first round in 1958.

The fleet commencing fishing in Area 3A this year was larger than in 1958. Generally good weather and excellent fishing was encountered on the grounds from Cape Cleare to Trinity Islands.

Landings to date from Area 3B, Shumigan Islands and west, including the Bering Sea, which opened on April 1, a month earlier than Areas 2 and 3A, total approximately 3,300,000 pounds compared to 1,900,000 pounds to a comparable date in 1958.

Pacific Fisherman's NEWS

JUNE 1959 Volume 57 Number 7

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Critical Crab Situation Develops in Washington

• Development of a critical situation in the Dungeness crab fishing, packing and distribution industry of the Washington coast in May closed some of the largest plants, curtailed the operations of others, threw around 200 plant employes into idleness, and cut fishing operations sharply during the best "run" of the current crab season.

Another result was purchase of the Kaakinen Fish Co. cannery at Westport, Wash., by a company composed of members of the Washington Crab Association. This plant went into operation on crabs delivered to it by members of the cooperative. Its operations, as well as those of the association, are being directed by Richard Rydman, president of the W.C.A.

While not disputing the propriety of the Washington Crab Association members entering the crab packing and shipping field if they wished to take the risk, established operators challenged several practices of the Association.

These allegations included:

1. Contention that the price was moved from 12 to 14, and finally to 16c per lb. ocean run, by the cooperative without discussion with the buyers or consideration for the economics of the crab business in a year of scarcity in Oregon and Washington, and of record abundance in northern California.

2. Alleged refusal to sell to the larger established buyers in quantities which could be marketed on the basis of a 16c buying price; and insistence on a truckload as the minimum order which would be accepted from such larger buyers.

3. Reported refusal of the association to permit re-sale of less-than-truckload quantities to dealers who did not feel able to buy in the larger quantities.

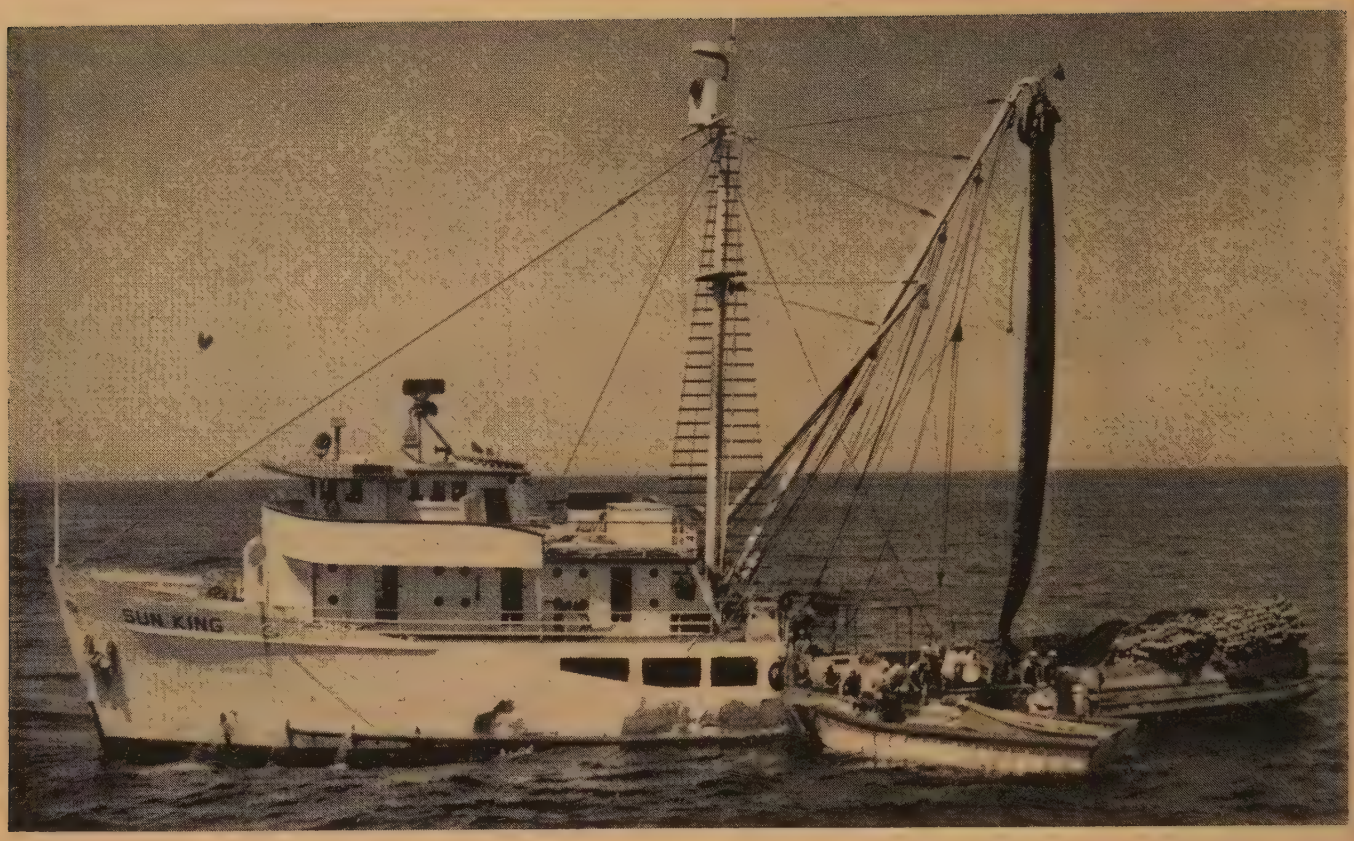
• One crushing factor in these developments was that they forced a shutting down of many Washington operations at the time, about April 20, when the crab fishing became better than it had been through all of the previously very poor season.

In Oregon operations were continuing rather actively at a price of 15c. In Eureka the price was 17c, reflecting the normal differential of 2c over the Washington coast buying figure. This differential arises from a variety of factors: proximity to the large California market; and the larger legal size for crabs in California, making the value per pound higher. With the Washington supply of crabs greatly reduced, the economic advantage at Eureka was regarded as above 2c.

Washington dealers did not minimize the seriousness of the situation to them and their employes. They pointed out that the disappointing down-turn in shrimp fishing off the Washington coast had resulted in a sharp setback in what had been a promising new industry a year before. This was followed by the low level of crab production during the past winter and early spring. Then in the late spring, as crab abundance returned to normal, the producers had advanced the price to levels which forced the larger concerns to close—and all at a time when buyers to the south were getting crabs for less money.

Harmon Buys "Sally"

A. Y. Harmon, Seaview, Wash., has purchased the troller *Sally* from Harold Hines, Port Angeles. At the present time the vessel is fishing from Evans Radio Dock, Oakland, Calif.



The Pioneer—Zuanich Brothers' steel seiner **Sun King** brailing a catch of tuna off northern Peru. This vessel in 1957 pioneered the present trend toward conversion of tuna clippers to purse seine service. She was photographed from the bridge of **Sun Jason,** one of the most recent conversions, at the end of her long run south from San Diego to seine tuna for Westgate-California's Peruvian affiliate, Frigorificos Paita, S.A.

1958-1959—A Turning Point For Tuna Purse Seine Fishing?

By
CRAIG J. ORANGE
and
GORDON C. BROADHEAD

• Purse-seine fishing for tuna was sensational during the 1958 season. The California based fleet of large seiners caught, in total, over 32,000 tons of Yellowfin, Bluefin and Skipjack tuna. This Bonanza was shared among 44 vessels, about half the number that fished for tuna a decade ago. The average catch-per-vessel increased to 741 tons, a level several times that reached in many of the earlier years. A summary of the number of vessels, total catch of each species and the catch-per-vessel for the years 1947 to 1958 are shown in Table 1. These data are for large seiners regularly engaged in tuna fishing, and *do not include the catches of small local purse-seiners not regularly engaged in fishing for tuna.* Our estimates, particularly for Bluefin tuna are, therefore, considerably smaller than some published statistics, which are for the catches of *all* seine vessels.

A few years ago, the tuna seine fleet, beset by the rising costs of operating old equipment and the depressed prices of tuna, appeared to be permanently relegated to a minor role as producers of tuna. No new vessels had entered the fishery for nearly 10 years and the fleet was dwindling rapidly from losses, transfers to other fisheries, and the inactivation of the older vessels. Then, in 1957, the Zuanich brothers of San Pedro took a bold step and converted and modernized the bait clipper *Sun King* for seiner operations. The subsequent success of this vessel fishing off Peru (*Pacific Fisherman,* October 1958) and the remarkable catches of the California fleet last year have resulted in the conversion of seven more large clippers to net operations. The past year was a particularly disappointing one for the bait fleet, as the larger vessels were forced to spend a good deal of their fishing time on the distant grounds.

Mr. Craig and Mr. Broadhead are members of the scientific staff of the Inter-American Tropical Tuna Commission, La Jolla, Calif.

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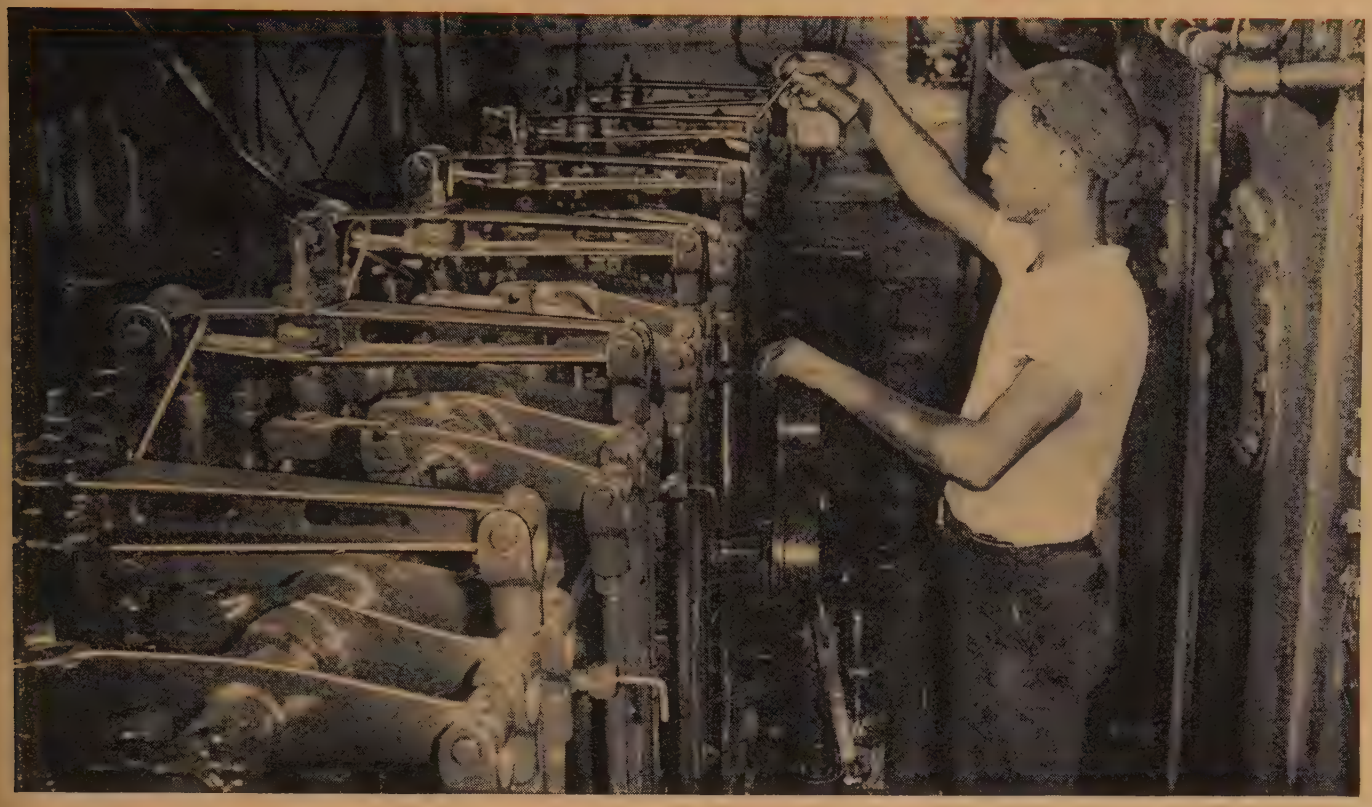

Chief Engineer John Randazza (above) reports RPM DELO Oil makes a big improvement in performance of 250 hp Atlas diesel powering 105-ft. M/V Olympia. "Our previous oil plugged lines and left thick engine deposits," says Mr. Randazza. "Since changing to RPM DELO Oil we've had no plugged lines. We had the heads off after 10,000 hours' operation...the inside of the engine was spotless!"

M/V Olympia's Captain Thomas Scola (left) says, "In our kind of fishing we're out three or four days at a time, with the engine running almost constantly. In spite of this, RPM DELO Oil keeps it clean, and our oil consumption is less, too." M/V Olympia (right) fishes for whiting in summer, haddock and cod in winter.

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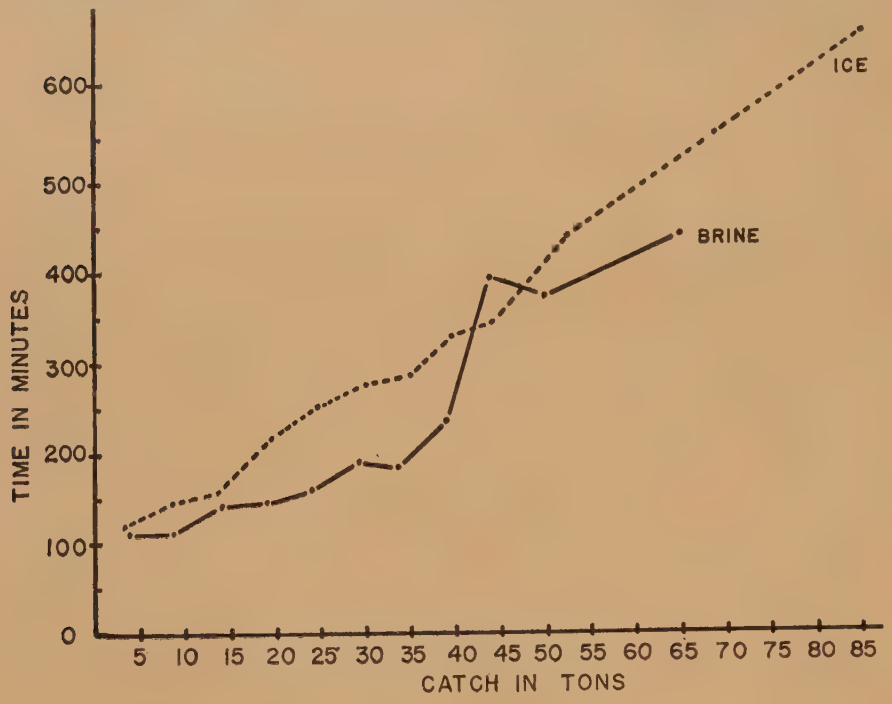
FIGURE 1. The time-per-set and the catch-per-set for two groups of purse-seine vessels, those using ice and those using brine refrigeration.



Conversions are costly. Estimates run over $100,000, plus the loss of one or two fishing trips during the lay-up time. Many owners of bait vessels are currently asking: "Will the purse-seine fleet continue to enjoy the recent high level of fishing success?" The answer is not clear cut. For one thing, a series of favorable factors have combined in recent years to make net fishing for tuna very attractive. Technological advances have been rapid, with brine and brine-spray refrigeration replacing ice, rapid handling of the new, light nylon nets with Power Blocks, and the use of land-based spotter aircraft to locate the tuna schools. In addition, an unusual oceanic climate has apparently shifted the tuna distributions into areas fished by the fleet, a fact often overlooked by the enthusiastic proponents of purse-seine fishing methods.

During December, 1958, we conducted a survey of the fleet to determine the extent of modernization of each of the purse-seine vessels. Comparison of the fishing success of vessels before and after modification with the success of other vessels that remained unchanged over the same period of time permits some quantitative evaluation of the effectiveness of the modernization program.

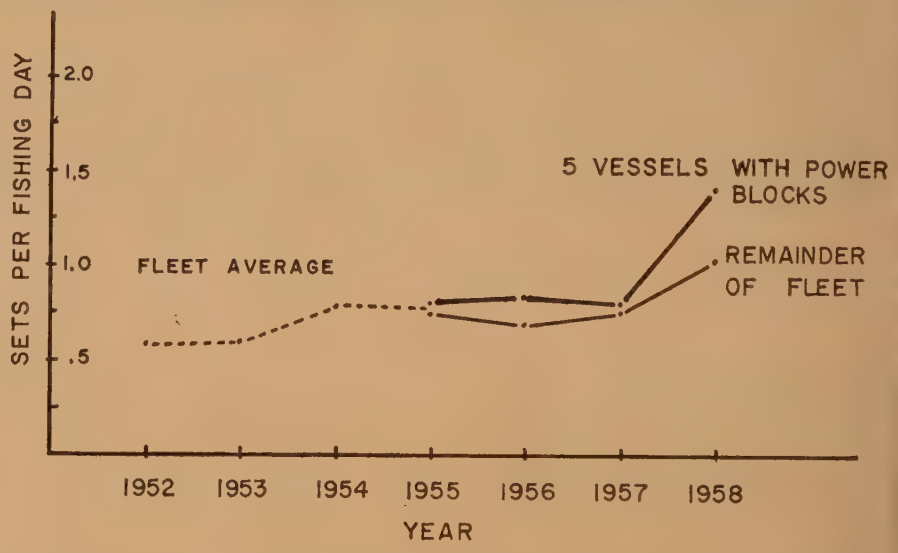
Brine and Brine-spray Refrigeration

● Many of the vessels have improved their methods of handling tuna by the installation of both brine and brine-spray refrigeration systems to replace ice. The clipper fleet had long since made the switch from ice, but most of the purse-seiners, with limited additional hull buoyancy, could not convert to all brine. At best the average seiner could install several of the brine immersion tanks. However, in 1957, the seiner *Jo Ann,* introduced a new system of brine-spray circulation (*Pacific Fisherman,* August, 1958) which retained the advantages of the brine immersion method without the great increase in weight. The development proved to be a breakthrough for the fleet and has since been widely adopted. Elimination of ice storage has greatly reduced the handling time of the catch, especially for sets of over 15 tons, and has resulted in more fishing time per day at sea. Presented graphically in Figure 1, the time-per-set is plotted against the catch of tuna for two segments of the fleet; vessels using ice and those using brine or brine-spray refrigeration. Ice vessels took an average of 30 minutes longer in 15-ton sets and 90 minutes longer in 30-ton sets than did the brine vessels.

The power block

● The Power Block for recovering the tuna seine was introduced to the fleet in 1955 by the *Anthony M.,* being adapted from the original design used in the salmon and herring seine fisheries of the Pacific Northwest. During the 1958 season six of the San Pedro tuna seiners were using the Power Blocks and at the start of the 1959 season about half of the fleet was so equipped. Probably the largest advantage in mechanically retrieving the net is the time saved on "skunk" or small catch sets. An average of 134 "skunk" sets by seiners using the Power Block during 1958 took 58 minutes per set while the fleet average was close to 110 minutes per set.

FIGURE 2. The sets-per-day's-fishing for vessels using power blocks during 1958 compared with the sets-per-day for the remainder of the fleet.



In Figure 2 the number of sets-per-day for five vessels using the Power Block during 1958 (but which did not have it in previous years) is compared with the number of sets-per-day for the rest of the fleet. Based on this limited amount of information the Power Block vessels made about 40% more sets each fishing day than those vessels not using the power method. However, the data for earlier years, indicates that the seiners with Power Block in 1958 made about 10% more sets than the remainder of the fleet before they installed the Power Blocks. Both groups experienced a sharp increase in the number of sets-per-day last year, apparently related to the high abundance of

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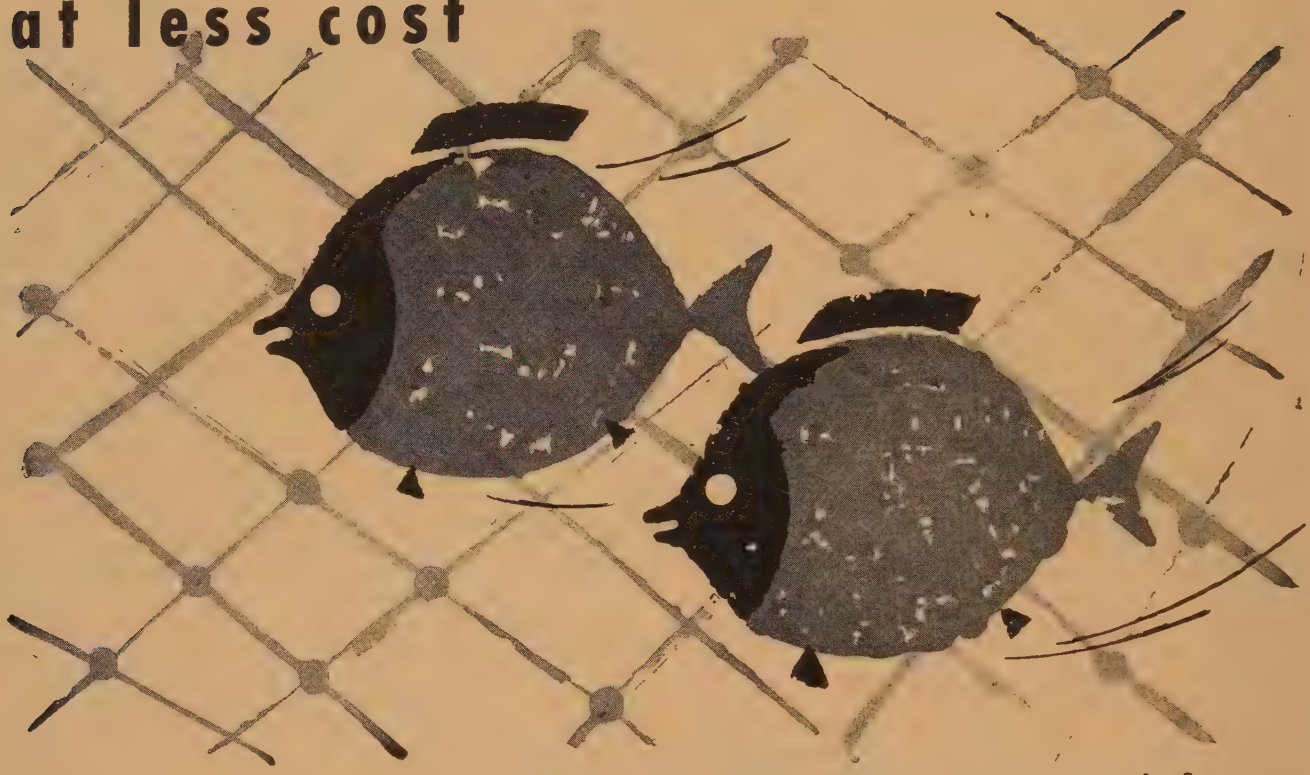

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schools on the fishing grounds. Both groups of vessels made successful sets about 50% of the time and caught an average of 15 tons per successful set. The fleet, when entirely equipped with the Power Blocks will be able to make more sets each fishing day and effect an overall increase in catching efficiency. However, as only six of the fleet were equipped with the Power Blocks during the past season, this modification has been a minor factor in the success of the fleet in recent years.

Nylon purse-sines

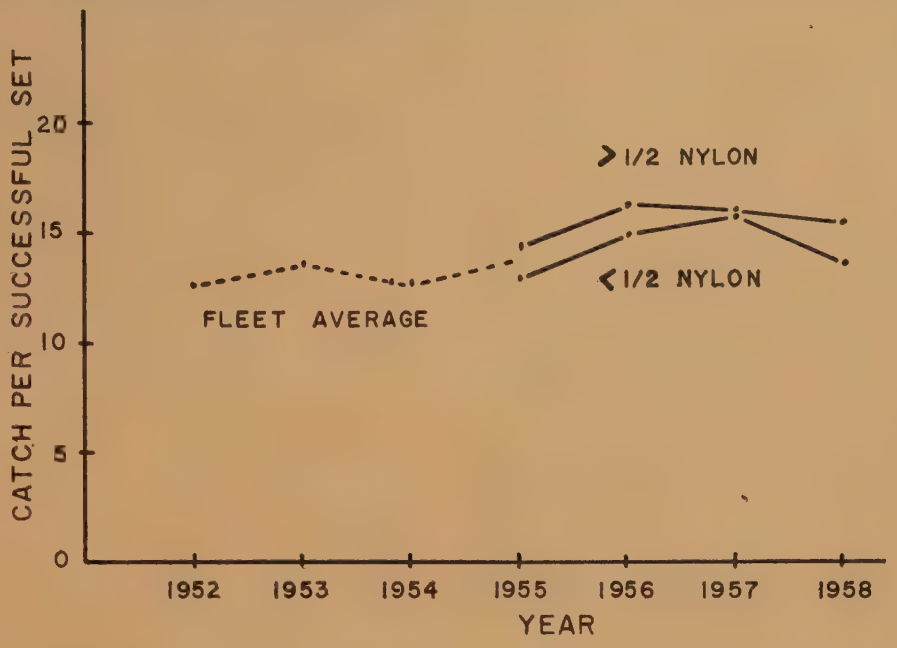
● *Anthony M.*, skippered by Anton Mesitich of San Pedro, scored another first by introducing the first all-nylon tuna purse-seine in 1956. Heralded at that time as the salvation of the industry, this type of net has gradually been adopted throughout the fleet since that time. The cotton sections in most of the nets have been replaced with nylon strips as needed and by the end of last season most of the fleet had at least some portion of their nets of nylon. Champions of the synthetic webbing claim that it will outlast cotton, and that the stronger net will permit the capure and retention of larger schools of tuna. To examine the latter claim we have plotted, in Figure 3, the frequency of the catches of successful sets for the fleet during 1958, together with the seven-year mean distribution. There is no measurable difference between the mean distribution and that of 1958 when many of the vessels had nylon nets.

To examine this in further detail we took the average catch-per-successful-set over the past four years for two groups of vessels, those with nets of more than half nylon and those with nets of less than half nylon during 1958. In Figure 4 the plot shows that the former group caught more fish per set than the vessels with less than half nylon in their nets in 1958, but this difference was consistent during the four year period. Evidently, the superior vessels effected the change to nylon first.

Land-based spotter aircraft

● During the 1958 season the purse-seine fleet made extensive use of land-based aircraft for spotting and directing the vessels to tuna schools. These aircraft, operating from California and Baja California bases, are independent of the fleet and are financed by sharing in the proceeds of successful sets that they direct. That these aircraft have continued, on this free lance basis, for any length of time, is excellent evidence that their advice is highly regarded by the skippers of the fleet. It is not possible, however,

FIGURE 3. The catch-per-successful-set (in tons) for two groups of purse-seiners, those with more than half nylon and those with less than half nylon in their nets during 1958.



to evaluate their effectiveness in terms of additional tonnage caught by the fleet. The usefulness of such aircraft will vary from year to year, depending on the areas in which the tuna are concentrated. In years when the best fishing is found at the Revillagigedo Islands and off the Mexican coast, these aircraft will possibly be of little aid to the fleet.

A smaller fleet

● The tuna purse-seine fleet has steadily declined in numbers in recent years from a high of 89 vessels during 1948 to a low last year of 44. The vessels tend to congregate in large fishing groups and these groups have grown progressively smaller in recent years. At the present time, this grouping and exchange of information is a definite advantage, but as the number of vessels increases, competition for the available schools will become keener. It may be necessary for the seine vessels to resort to spending a greater portion of their time scouting for new areas of fish if competition does increase.

Biology of tuna populations

● The magnitude of Bluefin and Skipjack tuna populations from year to year and their availability to the fishermen are apparently controlled by the natural conditions in the sea. The present status of scientific knowledge in this matter permits only the limited statement that in some years (as in 1958) the fleet will find large concentrations of these fish and in other years (as in 1951) there will be fewer schools within the range of the fishery. We do know, however, that in addition to these natural fluctuations in availability, Yellowfin tuna respond quickly to heavy fishing pressure. The California based seiner fleet has, in the past, concentrated its efforts in four major areas, the Gulf of California, the Mexican coast off Manzanillo, the Revillagigedo Islands and off the Pacific coast of Baja California; all areas at the northern extreme of the tropical tuna fishery. Our present knowledge suggests that the Yellowfin found in these areas, with the possible exception of the offshore islands, are all components of the same population. The conversion of many of the large bait vessels* to net operations will concentrate a large amount of fishing pressure on these northern grounds. As this effort for Yellowfin tuna increases it is logical to expect the catches of the individual vessels to decline noticeably.

Summary

● It is evident that the purse-seiner modernization program has produced a vessel of increased efficiency in catching and storing tuna. These vessels, equipped with brine and brine-spray refrigeration, Power Blocks and nylon nets will, *if the fish are available to purse-seine methods,* be able to catch a good deal more tuna than in the years prior to 1958. The uncertain factor is, of course, the phrase in italics. The sensational fishing of 1958 was mainly attributable to the excellent availability of tuna and not, as generally supposed, to the increase in vessel efficiency. Power Blocks are a great aid, but only six of the fleet had them last year. Re-

* The bait fleet normally covers the entire range of tuna fishing areas from California to Peru and offshore a distance of several hundred miles.

Another MURPHY DIESEL heads for salmon

• And another fisherman goes to sea confident that for years to come he has an engine that will make it possible for him to do more fishing at lower cost—a Murphy Diesel engine.

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TABLE 1. Estimated catch of yellowfin, bluefin and skipjack tunas by the large California based tuna seiners for the years 1947 to 1958.

Year	Number of vessels	Catch of tuna in tons				Tons per-vessel
		Yellowfin	Bluefin	Skipjack	Total	
1947	84	12,686	7,637	3,988	24,311	289
1948	89	17,352	2,036	2,230	21,618	243
1949	79	12,148	1,589	2,214	15,951	202
1950	67	17,478	1,004	6,329	24,811	370
1951	78	7,273	1,316	6,383	14,972	192
1952	64	15,141	1,803	5,298	22,242	348
1953	64	17,770	2,571	5,700	26,041	407
1954	69	8,405	9,041	9,390	26,836	389
1955	63	13,540	5,317	5,716	24,573	390
1956	64	20,095	5,246	2,787	28,128	440
1957	50	16,024	6,940	2,961	25,925	519
1958	44	20,088	10,352	2,144	32,584	741

frigeration improvements permitted a modest increase in potential fishing time. Nylon nets, apart from cost and handling advantages, did not produce more tuna per successful set. The ratio of "skunk" hauls to successful sets has remained virtually unchanged in recent years. Aircraft scouting was employed successfully as the concentration of tuna were within aircraft range during 1958. The amounts of Bluefin, Yellowfin, and Skipjack tuna available to the fishery will fluctuate from year to year, with the past year certainly being a high point in this trend. If fishing pressure for Yellowfin tuna increases greatly at the northern range of the fishery, it is logical to expect the catches by individual vessels to decline noticeably.

During periods of poor fishing at the northern range of the fishery, the fleet can, of course, adopt the tactics of covering the entire range of fishing from California to Peru. This may, to some extent, reduce their catch-per-day's-absence from port and curtail the close-to-port type of fishing that has been so advantageous in the past.

This year may be a turning point for producers of tuna, purse-seine and bait boats alike. The recent developments in net fishing have stimulated all segments of the industry to thinking about methods of cutting costs of fish production. World demand for tuna is increasing steadily and there are definite indications that supplies of the raw product are more limited than are generally realized. It will take several more years of fishing experience to settle the question of whether seine or bait fishing methods can produce tuna in the most economical manner.

Seiners Are Modified To Meet Alaska Limit

Modification of a number of Puget Sound purse seiners to enable them to conform to the Alaska Limit of 50′ custom house measurement is reported from Puget Sound yards.

One of the notable conversions is that of Capt. John Bacoka's *Johnny B.*, which was altered by the Skansi Yard, Gig Habor, Wash., and has received her new papers.

While several of the vessels are being converted by actual rebuilding of the bow or stern, methods of modification which can be applied with less expense have been developed to meet cases where the stern is sound.

One such device involves tilting the rudderstock forward, while keeping it in the straight line required by the Custom House rule.

Another method by which as much as a foot can be gained without effecting the framing of the vessel involves replacing the stem timber with a thicker piece, permitting the planking to be shortened materially without changing the frames. Measurement at the bow of the vessel is to the point where the planking meets the stem.

California Troll Boats Active in Spring Sales

The 28′ double-end troller *Joyce* has been sold by Mrs. F. D. Martins, widow of Frank Martins, to Martin Larsen of Cupertino, Calif. The boat has a GM 3-71 diesel engine, Fisher direction finder, Raytheon 100 fathom depth sounder, Wood Freeman automatic pilot and 6 spool Kolstrand gurdies.

The 40′ *Lynda Alicia* has been purcased by Karl Gunther of San Francisco from Ed Comer of Monterey. The boat has a Chrysler Royal 146 hp. engine, a gasoline powered generator and 2-spool power gurdies.

Sharon II, formerly of Morro Bay, has been sold by Jim White to George Smith of Huntington Park, Calif. The 42′ boat has ¾″ marine plywood hull with all joints and seams fiberglassed, Danforth anchors, rigging for salmon and Albacore, 250 gallon twin fuel tanks, 225 hp. GM engine, 150-watt Sonar ship to shore radio and telephone, Bendix sounder, forward and reverse GMC gear box.

Bob Clarke, Brookings, Ore., has purchased the dragger **Jefferson,** from **Ned Hatfield,** Crescent City.

JOHN GARGAS, skipper of the California seiner **City of Los Angeles,** admiring the Bendix automatic direction finder aboard his cousin's **Columbia** at San Pedro. He credits the ADF with much of the Gargas success during the past fishing season.

Sitka, well known Eureka dragger, owned by **Oliver Stiles,** got a new forefoot, part of the keel and part of the bow at Gillette Marine Ways, Fairhaven, Calif. **Sitka** had hit the rocks south of the jetty.

Christian S., trawler owned by **Edward Sverdon,** Seattle, hit some rocks near Fort Bragg. Fortunately she was able to make it to Fort Bragg where she went on the ways of Gillette Marine Ways. A new forefoot was put in and repairs were made to the bow and part of the keel.

Stephanie, well known dragger, formerly owned by **Bill Johnson,** Eureka, has been purchased by **Dave Krueger,** Eureka, former owner of the **Aurora.**

Fred Zilker, skipper of the troller **Bee-Bee,** and **Charles Huffman,** skipper of the troller, **Alice H.,** both of Fort Bragg, have installed Apelco radio telephones purchased from the Noyo Store, Noyo Harbor, Fort Bragg. **Charles Whiteford,** skipper of the troller **Brownie,** has installed a Ross depth indicator.

Kenneth Nelson, formerly foreman of the I Street plant, Hunter & Foland Fish Co., Eureka, has been promoted to the post of manager E Street plant, according to **Bud Thomas,** general manager of the company. The E Street plant is a salmon and crab receiving station, with facilities for crab cooking.

Dick Wirta had the GM 6-71 diesel engine on his troller **Sea Wolf** overhauled by West Coast Engine & Machine Works, Noyo Harbor, Fort Bragg, as did **A. Tarantino,** owner of the troller **Tarantino Jr.**

Mike Gibney and **Kelly Bridge,** Fort Bragg, have bought the **Jolly Roger,** a former San Francisco party fishing boat, from Aldo and Luigi Recchioni. She is a **56** footer and will be used as a salmon troller and possibly rigged for shrimp fishing.

Miss Laverne Figueiredo, daughter of **Manuel Figueiredo,** owner of the well known Fort Bragg trawler **Noyo Star,** and Mrs. Figueiredo, will be married to **William Moore,** USN, in June her parents have announced.

Nelson A. Miles, owner of the troller **Irene M.,** has repowered her with a General Motors 2-71 diesel engine, rebuilt and installed by West Coast Engine & Machine Works, Noyo Harbor, Fort Bragg.

Eureka Is Pay-Off Point For May Salmon Trolling

• Salmon trolling bulged handsomely off Eureka the middle of May and thereafter, and the local fleet once more felt their port was well-named. They were doing nice with their fishing, but it soon brought the neighbors from the North.

The fleet had a meeting at Eureka May 22 and there were 40 members of the Fishermen's Cooperative Association *of Seattle* present. Not only that, but Humboldt was home for scores of other boats from ports north and south.

The fish being taken were running above average in weight for Eureka, but couldn't class as lunkers.

• Oregon coast trolling was weak in May; and Westport was almost a total loss. Neah Bay was better, but far from good.

The big migration of boats which went north to Alaska from Puget Sound and the Columbia River this spring seemed to be fishing its way back in May when volume up there did not suit. Prices for salmon in Alaska were steady at 45¢ for large red Kings and 30¢ for mediums.

On the Seattle market bids for large red Kings at presstime were 62½ to 65¢, with mediums 20¢ per lb. cheaper. White, large and small, were above 30¢.

• Warm water was getting the blame again this season—and that's probably as good a guess as any. It gives this ground for hope; if the warm sea water discourages the salmon and the salmon feed, maybe—just *maybe*—it will tend to stimulate the Albacore again this season. The longfins made a year out of it last season, when salmon were short; and they could do it again.

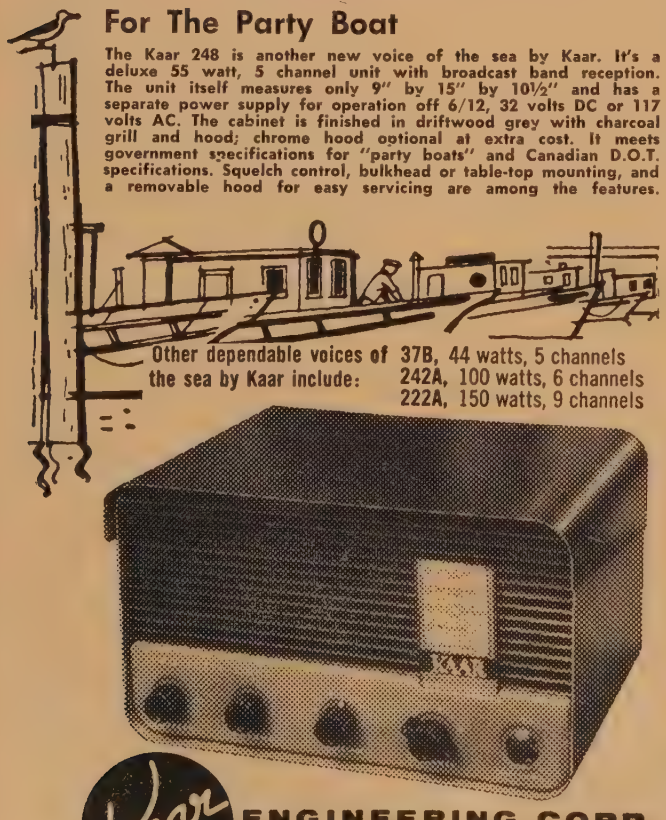
Up in British Columbia the practical oceanographers were inclined to believe that the warm water which made 1958 so abnormal was moving down the coast, and that temperature conditions were gradually returning to normal. Trollers were looking sharp for signs of Albacore, but experience gives few grounds for hope before early July.

Incidentally, and for what it may be worth: the Albacore fishermen working out of Yaizu and Shimizu, had found an almost complete failure to the end of the third week in May; when they should be in fish.

Soviet Vessel Gillnets Salmon on High Seas

Soviet salmon fishing on the high seas by means of gillnet was reported in Japan in April by a land-based salmon gillnetter fishing out of Kushiro, Hokkaido. This report, which created quite a sensation in Tokyo, said that a 200-ton Soviet fishing vessel was closely observed operating a salmon gillnet outside the Japan-Soviet treaty zone April 22. She was about 200 miles SSE from Kushiro, and was seen to be hauling gillnet containing salmon, probably either Chum or Pink.

Japan Fishery Agency in Tokyo was inclined to be unconcerned, despite the effect of the report in industrial circles. The official view was that the vessel must have been a research craft, as at the USSR-Japan conference meetings the Soviets repeatedly had declared they would not operate high seas salmon "fisheries". Research fishing would not be counted in this category.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The Kaar 248 is another new voice of the sea by Kaar. It's a deluxe 55 watt, 5 channel unit with broadcast band reception. The unit itself measures only 9" by 15" by 10½" and has a separate power supply for operation off 6/12, 32 volts DC or 117 volts AC. The cabinet is finished in driftwood grey with charcoal grill and hood; chrome hood optional at extra cost. It meets government specifications for "party boats" and Canadian D.O.T. specifications. Squelch control, bulkhead or table-top mounting, and a removable hood for easy servicing are among the features.
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SEALIONS—
And What to Do About the Pests

Possibilities for economic utilization of sealions in Alaskan waters, with a secondary benefit through reduction of their predation on salmon and other valuable fish, is the objective of a contract entered into by the U. S. Bureau of Commercial Fisheries with Arctic Maid Fisheries. The company's freezership *Arctic Maid* will be operated in the $50,000 project. She will operate from the vicinity of Kodiak Island westward and will carry a U. S. biologist and technologist.

Studies in particular will be directed at determining the economic possibilities of using sealion meat and liver for feeding on fur farms; utility of the hides for specialty leathers; return from reduction of the carcasses for industrial oil and meal.

It is understood that private enterprise is prepared to undertake utilization of the sealion population if the research indicates favorable economic prospects.

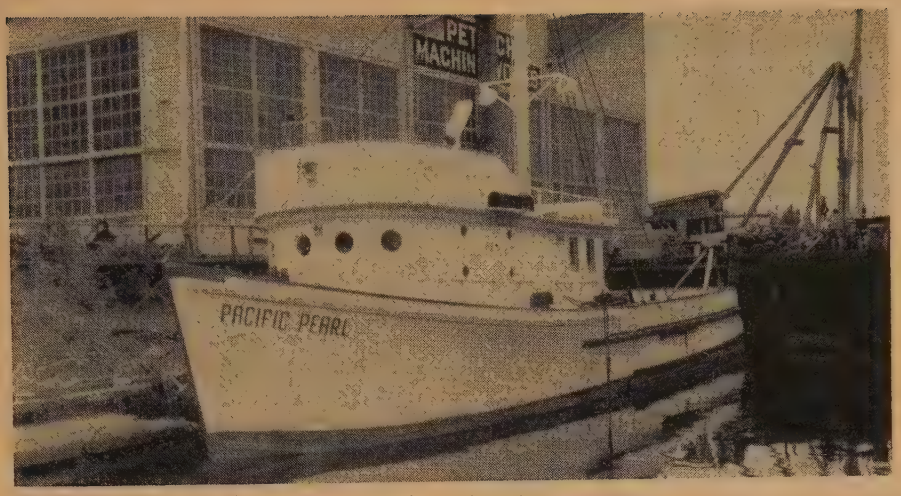
Two San Francisco Trollers Are Drowned

Two San Francisco fishermen were drowned when their crab boat *Rebel* went on the beach west of Frendale, Calif., last month. They were Louis "Gino" Liberati, and his teen-age son John.

The boat, along with its sister ship *Fortuna* had been delivering its catch to Tom Lazio Fish Co., Eureka. Cause of the tragedy was not known. *Rebel* had been fishing with *Fortuna,* on which was the elder Liberati's brother, Roger, off the Eel River, when radio communications between the two vessels went out at 10 a. m. Roger Liberati touched off an extensive airsea search.

Noyo Harbor Improved

The Noyo Harbor, Fort Bragg, plant of A. Paladini, Inc., has been improved with the addition of new executive offices, which are at ground floor level and give double the space of former offices. Louis Cavallini is manager of the Fort Bragg plant of A. Paladini, Inc.



PACIFIC PEARL, refitted as a shrimp trawler and ready to sail for Cook Inlet, where she will serve the Sutterlin and Wendt operation with two picking machines.

Jack Repanich Re-elected Fishermen's Packing Head

Jack F. Repanich was re-elected president of the Fishermen's Packing Corporation at the annual meeting held in Seattle May 12. All other officers were re-elected as follows: Peter Milos, Tacoma, first vice president; Andrew Vitalich, Seattle, second vice president; John N. Plancich, Anacortes, general manager, secretary and assistant treasurer; Frank Barcott Jr., Everett, treasurer; George Cuculich, Tacoma, assistant secretary.

Other members of the board of directors are: Paul Serka, Tacoma; Paul Martinis, Everett; Steve Zitkovich, Seattle; Paul D. Kink, Bellingham; and Joe Marincovich, Tacoma.

Directors Plancich, Milos, Zitkovich, Martinis and Kink were re-elected for two-year terms. The other members carried-over.

Pale Chinooks Halt California Troll Fishing

A freakish change in the color of Chinook salmon—from red to pinkish and almost white—tied up a majority of San Francisco and Monterey salmon trollers shortly after the opening of the California salmon season April 15.

The fish were reported to be running in that area from 20 to 25% pale. As a result dealers dropped the price from 50c per lb. for large, and 40c for medium and small to 22c per lb. for large "white" fish, and 18c for medium and small "pale" fish and the fishermen tied up their boats.

In Eureka and Fort Bragg, "pale" fish were scarcer, and fishing continued.

Theories for the cause of the "pale" salmon were many, such as: the fish are fatter and this makes them a lighter pink; an influx of pale salmon from northern waters; the salmon have switched their diet as a result of the warming of Pacific waters.

In Eureka dealers were paying 50c per lb. for salmon, large, cleaned, heads on; 42c medium, cleaned, heads on; and 38c small, cleaned, heads on.

Due to rough weather deliveries in Fort Bragg weren't made until April 20, when F. Alioto Fish Co. was reported to have received the first delivery. Catches there were small, but dealers and fishermen were optimistic there and in Eureka, that the season would be a good one.

Western Gear Produces Tuna Clipper Equipment

Pneumatic reverse and reduction gear of size and capability specially suitable for tuna clippers and large draggers is now being offered to the marine trade by Western Gear Corporation. Five years of research and development have gone into the engineering and construction of this gear, which is suitable for diesel engines from 800 hp. upwards.

The gear is actuated by externally-mounted pneumatic clutches and is designated as the PCMR gear. It is particularly protected against any damage or malfunction as result of operational misalignment.

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FISHING BOATS — Many now moored at Moss Landing Harbor ready for inspection: Monterey Clippers, Salmon Trollers, Refrig. Northern Albacore Trollers, Draggers, Seiners and other types. From $1,000 to $75,000. DON WOODWARD BROKERAGE, at Standard Oil Dock & Marine Store. Tel., Castroville NEwton 3-2620; Box 45-A, Moss Landing, California.

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42' North. DSL Troller, Rfg. $19,750.00
85' RFG. Seiner, 250 hp. $33,000.00
Many other commercial, fish and work boats of all types and sizes. Contacts in leading Pacific Coast ports. FRANK SIMON ASSOCIATES, 105 West "C" Street, Wilmington, California. Phone: TErminal 5-3101.

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Management Opportunities

Fast-growing Alaska seafood operation has opening for assistant superintendent, foreman, food technologist, bookkeeper.

Replies held strictly confidential. Please state qualifications and experience.

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Soviet Trawlers Work Northward With Bering Ice

• Soviet trawlers working eastern Bering Sea appeared in May to be moving north with the ice pack—away from the sensitive halibut grounds on both sides of the Aleutian chain and Alaska Peninsula.

Halibut fishermen and administrators evidenced relief.

At presstime the last word available as to the position of the Soviet fleet indicated that it was moving north slowly with the ice pack, which at that time ran from St. Matthew Island to Nunivak Island.

The Soviet vessels were fishing along the face of the retreating ice, and then making rendezvous with the motherships within the protection afforded by leads in the pack ice.

All information indicated they were moving away from the sensitive areas where their activities might adversely affect the salmon or halibut resources conserved under existing international agreements.

Specialized Steel Seiners Mark Significant Trend

George Peterson of the Peterson Boatbuilding Co., Tacoma, is betting on a specialized trend in purse seine fishing—standardization of what formerly was called the "jitney" or "baby" purse seiner, and which in more recent seasons has come to be known as a "beach" seiner—although not at all related to fishing by drag seine or beach seine.

In short, it is a steel vessel, capable of in-shore shallow-water purse seining, such as is practiced to a considerable degree on the west side of Kodiak Island and in Peninsula areas of Alaska.

Instead of seeking the maximum size which can be crowded inside the "Alaska limit," the Peterson standard jobs as only 35' by 11½', *drawing only* 30". The vessels are all-steel and sleep four men.

They are equipped with 185-hp. GM diesels, with tanks for 600 gals. of fuel and 200 gals. of fresh water. Driving through a full Monel shaft, the Jimmy gives the *Maverick*, prototype of the Peterson beachers, 8½-knot speed.

The vessels are designed specifically for power block operation and normally carry no turntables. They are readily convertible to crabbing, trolling or heavy gillnetter service.

Ralph Mason, skipper of the trawler **Memories,** out of Eureka, has installed a new Cummins diesel engine. **Memories** fishes for Hunter & Foland Fish Co., Fields Landing.

B.C.F. Opposes Dogfish Control by Bounty

Returns from developing world markets for dogfish products may one day pay cost of dogfish control program, Chairman Warren G. Magnuson, D., Wash., of senate interstate and foreign commerce committee told the committee hearing in May.

Until that time, the United States must determine a dogfish bounty program similar to that in effect in Canada, Senator Magnuson asserted during the committee hearing on his measure (S.1264) authorizing a bounty payment of $15 a ton for carcasses or 15¢ a pound on dogfish livers.

Senator Magnuson stressed that same obligation exists to protect "farmers of the sea" as land farmers from predators.

Appearing in support of the Magnuson measure were Washington State Fisheries Director Milo Moore, Representative Tom Pelly, R., Wash., General Manager Charles E. Jackson of the National Fisheries Institute and Washington representative Jeff Kibre of the International Longshoremen's Union.

Federal leadership is imperative in the dogfish control program, Mr. Moore declared, since the predator problem is so wide-spread.

A. W. Anderson, assistant director of the Bureau of Commercial Fisheries, Department of the Interior, opposed portions of the measure, contending there is no precedent for federal government furnishing money to fight predators in the sea. Senator Magnuson replied such assistance is furnished land farmers and should be as readily available to fishermen.

Andrea Asaro Dies

Andrea Asaro, 63 years old, a commercial fisherman and resident of San Diego for 35 years, died on May 4 in the Border City. Mr. Asaro was the father-in-law of Anthony DiLeva, San Pedro, skipper of the purse seiner St. Anthony IV, father of Mrs. Mary DiLeva. Besides Mrs. DiLeva, Mr. Asaro leaves his widow Josephine, three sons, Nicholas, Vito and Andrew, all of San Diego; another daughter, Mrs. Angela Giacalone of San Diego; two sisters; and eight grandchildren.

Veteran Fisherman Dies

Francesco Russo, 77, well known Pittsburg and Monterey fisherman, died in Pittsburg last month.

Mr. Russo was born in Sousa, North Africa, and came to Pittsburg 60 years ago. He fished in Alaska as well as California waters.

No Property Tax on Boats A-Building

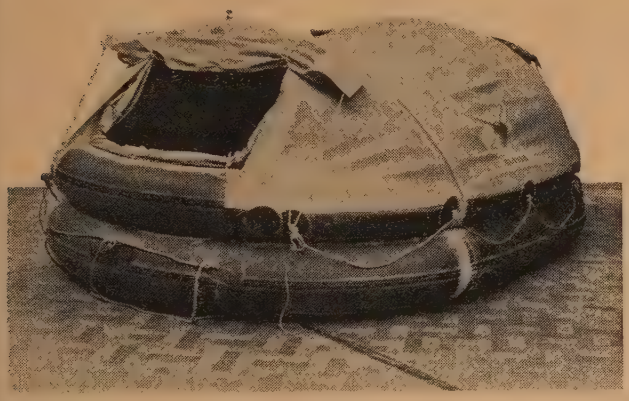
California's Governor Brown last month signed into law an exemption from property taxes of boats between 50 and 1000 tons while they are under construction on the ways.

This measure, backed by California shipyards, will make it possible for the yards to compete on even terms against yards in other states, which do not levy taxes on craft being built. California was the only state in which such vessels were taxable. The exemption was supported by Los Angeles city and county governments as well as by the yards.

Among those who worked for adoption of the exemption measure were John Rados and Val Bacica of Wilmington Boat Works; and Rusty Fellows of Fellows & Stewart.

Special Trawling Wheel Designed by Columbian

"Fishmaster" is the name given by Columbian Bronze Corporation to a new four-bladed propellor which was designed specially for trawlers. The four-blade design gives the pulling power required for most efficient trawl operation without sacrifice of speed, and with remarkable freedom from vibration.



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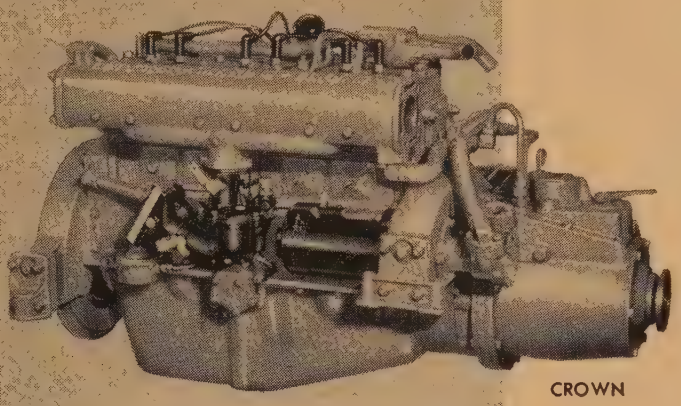
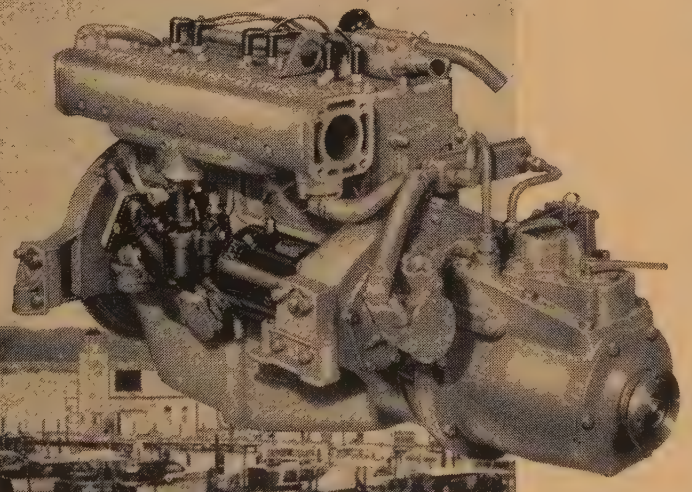


CROWN



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CHRYSLER

MARINE AND INDUSTRIAL ENGINE DIVISION

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Land and Sea of Opportunity —and Hard Work

This is Article Number 2, 1959 Latin America Series

That's South America, as seen by Jack Borcich, who in five years has fished the Humboldt Current for 2,000 miles successfully.

CAPTAIN JACK BORCICH master of National Marine Terminals' steel seiner **Sun Jason,** keeps a keen eye on the sea from the wheelhouse as his vessel runs the long courses from San Diego to Peru under the unfailing hand of her Sperry magnetic compass pilot.

● For five years, Jack Borcich has fished the South American seas from Mancora, Peru, to Antofagasta, Chile. The newly-converted *Sun Jason* is the third vessel he has operated in South American waters, where he is rated as one of the most experienced and successful fishermen of the Humboldt Current.

South America, Capt. Borcich says, is a land of great opportunity for a fisherman. His reason is simple: South America is where the fish are.

In 1958, Capt. Borcich, then commanding the *Sun Star,* a 75′ purse seiner, landed as big a season total, or bigger, than the best San Pedro seiners. He estimates that with the new 130′ *Sun Jason* he will land in 1959 at least 1,000 tons more Skipjack and Yellowfin tuna than he would have landed with the same vessel based on San Pedro.

The reason of course is that, fishing in South America and delivering to South American plants, his running time from the fishing grounds to port and back is cut to days rather than weeks.

"It doesn't take a lot of time to run from port to where the fish are in South America," Capt. Borcich says. "This year, with a late start, I expect to make possibly 10 trips."

Big Seiners Best

● "The best-suited boat for South America is the big purse seiner," skipper Borcich feels. "With a big vessel you get more tons off the big schools. Smaller boats often have to let tons of fish go simply because their nets and their holds aren't big enough to hold all they could catch. A big seiner will waste less fish that way.

"On the other hand, the cost of operating a big boat is not so high, compared to the fish capacity and size of catch."

However, Capt. Borcich now has an idea for a practical combination vessel that will have the advantages of both bait-boat and seiner. The details are far from ready to reveal — in fact, Capt. Borcich at this writing has discussed his idea with only a few people—but he is convinced that it is a practical idea and can be put into effect with comparatively small investment on a large purse-seiner.

"With this kind of boat," Capt. Borcich says, "you can catch many more tons of tuna a year. You could work any school, big or little, biting or not biting. If your school is too small to be worth making a set for, you could chum and catch them with poles. If it was a big school, or if the fish weren't biting, you could wrap them.

"Any tuna fisherman knows how many fish he has had to leave because they wouldn't bite; and there are lots of schools too small to set a big net for. With a combination boat, I'll bet you could almost fish every day of the trip—in South America, where there are lots of fish.

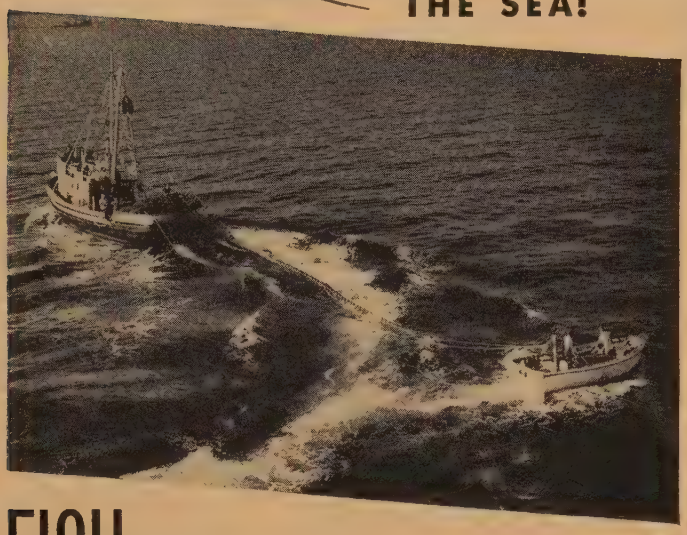
"A combination boat, I think, would be ideal for tuna in any country. You could finish the year with a lot more tonnage than with either a purse-seiner or a bait boat."

Room for Improvement

● While opportunities for fishermen in South America are great, there is plenty of hard work involved.

"We don't yet have very good facilities in South America," he says. "We don't yet have good harbors, and we lack trained men.

SWEEP NEW PROFITS FROM THE SEA!



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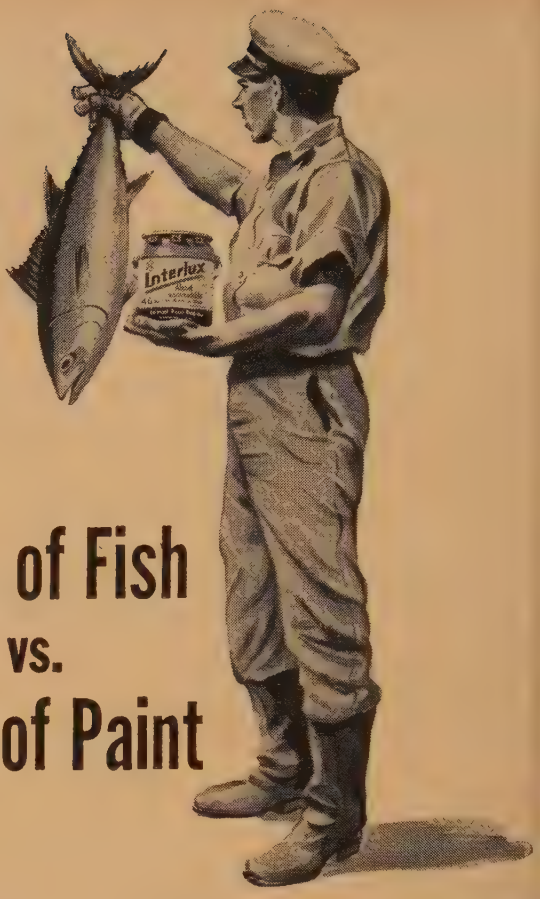

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WORLD'S LARGEST MARINE PAINT MAKERS

"Peruvians make good fishermen with proper training, but this is the time of training the men. Every good purse-seiner crew now needs a few experienced men, with the balance Peruvian fishermen.

"South American fishing ports need improvement. Unloading facilities are not what they should be, as everybody realizes. It is the duty of every boat captain to do his best to get his vessel unloaded quickly, and with the *Sun Jason* I intend to do the best I can to get unloaded promptly and go fishing again. I also intend to do whatever I can to get the right kind of unloading facilities put in."

Good port facilities mean a lot in other ways than unloading fish, Capt. Borcich points out. Good port equipment can speed up and cut costs on many operations.

"For example," he says, "after we hang the net for the *Sun Jason*, we'll have to take it out in a barge to the boat, then load it aboard. In San Pedro, you can hang a net and just put it right on the boat from the dock. We shall use hand power to handle our new net on shore."

There are also personal and family problems that have to be considered. Things in Peru are not the same as in the U. S. Some things are not as good, some things are better. There's more money to be made, if a fisherman is willing to work hard. On the other hand, if a fisherman makes a home for his family in Lima, he may spend most of the year at his port and not see them as often as in the U. S.

Capt. Borcich's own family has been living in Lima during most of his time in South America. The family includes a teen-age daughter who is in school in Lima, and who likes Peru and is glad to get back after vacations in the U. S.

The Mackerel Fishery

● Tuna, Capt. Borcich points out, is not the only fishery in South America. He is impressed by the abundance of mackerel, both Pacific and Jack, which have been extremely scarce in California in the past year or two.

"The mackerel in South America are out of this world," he says. "I have seen them so thick in Southern Peru and Northern Chile that it looked as if you could walk on them.

"Of course, to take advantage of the mackerel crop, the fish would have to be canned in Peru or Chile. Some are canned there now, but it is a hand operation and costs are high, so not enough people are buying and eating mackerel. I was told about some Argentine-canned mackerel selling in Argentina at about 16¢ U. S. a can, but this price should be cut lower.

"Mackerel now sells very well in the fresh fish market in Lima and other cities in Peru; but with so many fish in the water, mackerel should be a big item, fished by big boats and canned in Peru or Chile for home use and export.

"In the fresh fish market, Jack mackerel sells better than Pacific. People seem to like it better."

An International Career

● While it is true that Capt. Borcich's South American experience covers the coast from Mancora to Antofagasta, he has actually fished all the way from Tacoma, Wash., to Chile. In 1931 he was on the *Humanity*, a 66′ vessel owned by Justo Pesutich, took her to Tacoma from San Pedro and had a turntable put on her, after which he fished for salmon in Northwest waters for a season or two.

Jack Borcich fished out of San Pedro from 1930 to 1954, when he took the *Oakland*, an 83′ seiner, to Iquique, Chile, to fish for Empresa Pesquera Iquique for two years. Then he operated the *Sun Star*, an 85′ 80-ton purse-seiner fishing for Episa, at Ilo, Peru.

He first used nylon netting in the bag of a cotton-nylon net in 1957. In March, 1958, on the *Sun Star* he acquired his first all-nylon net, and will use an all-nylon net in the *Sun Jason*. He makes full use of all conventional electronic fishing aids. The *Sun Star* carried a Fathometer, radar, direction finder, two-way radio, and automatic pilot. The *Sun Jason* is similarly electronically equipped.

Hager Packers, Ltd., Canning Sugar-Cured Smoked Salmon

● All four Hager brothers, the sons of the late A. L. Hager, celebrated figure in Canadian fish packing and conservation, are in the fish business now.

Roger T., of course, is president of The Canadian Fishing Co.; Norman is head of Bayside Suppliers, Ltd., canned fish broker and exporter; Douglas is production manager for New England Fish Co. in Seattle; and now the eldest brother, Robert, after many years in the investment and other fields, has launched a canned smoked salmon business, with a plant at Langley on the Fraser River. He resisted the attractions of the fishing industry for a long time, but finally surrendered.

Bob Hager's venture is known as Hager Packers, Ltd. It is a modest enterprise, and the processing operation at Langley has no pretension to size and large volume pack, but is interesting for its product-smoked Coho salmon in 2¼-oz. hand-packed cans with olive oil.

Hager Packers have been offering this product in cartons of four and eight. The sugar curing process is Norwegian, with a few modifications that make the product unique. While aluminum cans have been used so far, with the familiar key-opener attached, it is understood that a new type of packaging is being considered, using a flexible film.

The trade has shown considerable interest in this new method of merchandising Coho, and there have been some inquiries from the United Kingdom. One of the problems has been to stabilize volume production at a level that will make it economic to offer the product at less than luxury prices. But Bob Hager is confident that this will be solved before long.

The Hager family has been associated with the commercial fisheries of the North Pacific even since Al Hager went to the coast as an executive of New England Fish Co. to stimulate production of halibut and other species for the Eastern market. He stayed to become president of The Canadian Fishing Co. in 1908—a position which he held for 40 years—and will long be remembered as one of the pioneers of halibut and salmon conservation.

The latter phase of the Hager tradition is being maintained by his son Roger who, in addition to his presidency of Canfisco, is one of the original members of the International North Pacific Fisheries Commission. A few weeks ago he was elected president of the Fisheries Council of Canada, whose annual meeting will be held in Vancouver next year.

Coast Oyster Plants 8,000 Cases in Calif.

Coast Oyster Co. is continuing its development of Humboldt Bay, Calif., for ultimate production, and toward this end within recent months, has planted some 8,000 cases of Japanese seed oysters.

F. M. Douglas, Humboldt Bay manager of the company, stated the firm is now packing frozen oysters for the Armed Forces. The oysters are packed in ¾-gal. American Can Co. cans and frozen.

Proper Processing Points

Time and Temperature are not Everything

● Although Pacific seafood canning is close to 100 years old, there are occasions when the Northwest Branch of the National Canners Association turns up instances of improper retorting, with resultant loss and grief.

Walter V. Yonker, director of the N.C.A. Northwest Laboratory, is inclined to feel that improper practice must bear much of the responsibility for this condition; and that this is possible in spite of the fact that the fundamental factors of time and temperature *appear* to have been met.

Standard processing specifications worked out by the N.C.A. are based on "pure" steam, as cited in a report on retorting prepared by the N.C.A. Committee on Retort Equipment and Operation, a report which Mr. Yonger suggests as valuable for any seafood canner.

Its main points:

● Proper processing times and temperatures have been determined by the National Canners Association Laboratories and other affiliated organizations. The recommended cook times have been established to insure sterility while still maintaining quality. Often it is necessary to tread a narrow path between success and failure. Failure may result from either the use of improper equipment or incorrect operation of satisfactory equipment.

The N.C.A.-recommended processes were established by cooking in "pure" steam, which means steam with no air present.

Before the steam is turned on, much of the retort space is occupied by air. To eliminate this air the operator must literally blow it out with steam. This is called *venting*, and should not be confused with *bleeding*. Bleeds are the small petcocks which serve to eliminate small amounts of air that enter the retort with the steam, and also to create circulation in the thermometer well.

In order to vent properly, correctly installed and operated equipment must be used.

● What constitutes correct installation?

1. Steam supply must be adequate. Steam pressure in the cook room main should be not less than 90 psi. at all times during operations.

2. The steam inlet to the individual retorts must be large enough to provide for venting the retort in a reasonable time. A 1" pipe size is minimum.

3. Steam spreaders are necessary. These are pipes with a series of holes to distribute the steam and eliminate entrapped air during venting. *Baffle plates must not be used.* They create and protect air pockets.

4. Vent openings must be large enough to eliminate the air during the come-up period. These lines should be at least one pipe size larger than the steam inlet, and gate valves must be

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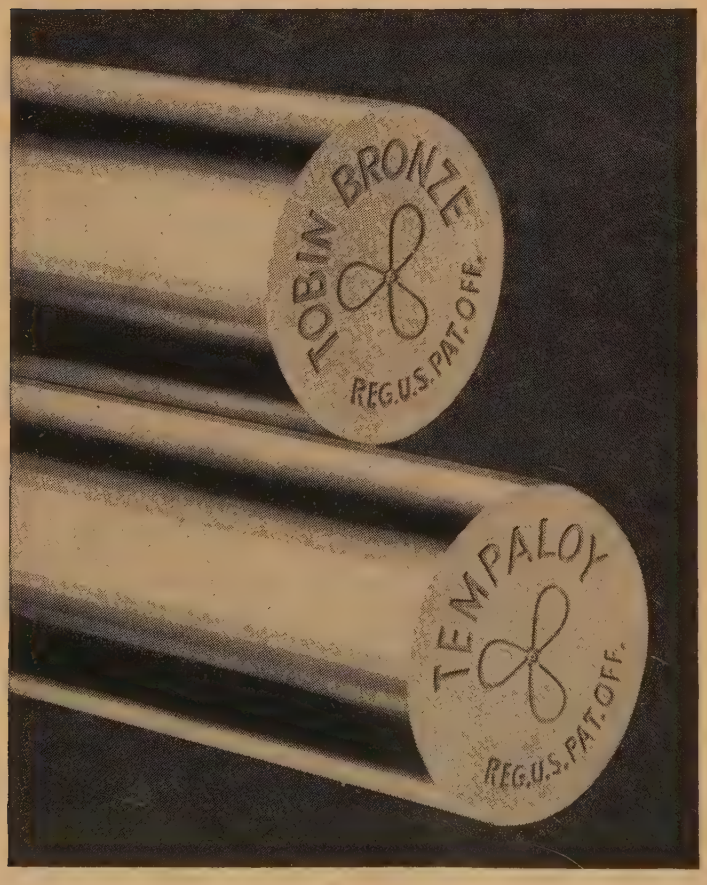

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used. The lines must be open to the atmosphere or into a manifold. There must be no possibility of back pressure in the line.

5. Thermometers are the basic reference for the correct processing temperature. It is imperative that they be accurate, dependable, and easily seen by the operator. They should be checked for accuracy at least once a year against a standard instrument. The range should be 170° to 270° F., with scale divisions not greater than 2° F. Up to now, only mercury-in-glass thermometers have met all requirements for accuracy and dependability.

6. Pressure gauges graduated in 1-lb. divisions and having a range to 30 lbs. and a minimum diameter of 4½" are recommended. These gauges should be checked at least once each year. The gauge should be connected to the retort by means of a gauge siphon or goose neck.

7. Automatic control equipment is necessary. The equipment should control the temperature within a range of 1° F. The controller must be adjusted to agree with the thermometer.

8. Valves on the air and water lines must be kept in good condition so there is absolutely no leakage into the retort during the process.

9. Safety valves of adequate capacity are necessary to prevent excessive pressure in the retorts.

10. Retort baskets and separator sheets, where they are used, should have enough openings so the steam can flow freely throughout the entire load.

● Proper installation of suitable equipment, and information on correct cook times and temperatures are not enough, however. Cook room operators must be carefully selected and must fully understand the importance of operating the retorts correctly. They must be instructed in the operation and willing to follow these instructions. This is a management responsibility. Management should not burden the operators to the point that they cannot fulfill their duties properly. An additional responsibility of management is provision of reasonably comfortable working conditions through ample ventilation.

Good processing practices entail the following:

1. The cans should be processed without delay after closing.

2. All air must be removed during the venting period so as to obtain "pure" steam. No single venting specification is entirely applicable to all retorts. For a standard retort a minimum suggested requirement is that the vent valve be kept *wide open* until the thermometer reaches at least 220° F. and open for not less than 3 minutes. When separator sheets are used between the layers of cans, longer times to higher temperatures are required for adequate venting.

3. Process timing is started only when the thermometer reaches the specified processing temperature. This time period must be accurate and in accord with the suggested schedules. Timing devices are available which will assist the operator in accurate time control. As pointed out previously, the temperature should be controlled within a range of 1° F. of the specified temperature.

4. Following the cook, the product should be cooled promptly to an average temperature of 100°-105° F.

Due to many variations in piping and retort sizes, specific details regarding installation, venting, and other operations cannot be covered in this brief discussion. Further information is available from the N.C.A. Northwest Laboratory, Seattle, and in standard canning reference publications.

San Mateo Trixler Office Handles Van Camp Line

The Trixler Brokerage Company of Portland, Ore., will open a Northern California office at 323 Villa Terrace, San Mateo, Calif., it was announced recently by J. Thomas Trixler, President. Vice-president in charge of sales will be John T. O'Leary of Santa Clara, formerly with the Fred Meyer chain of Portland, and, more recently, with the SeaPak Corporation as divisional manager. The San Mateo operation will represent the Van Camp Sea Food Company and other principals to be announced later in both their canned and frozen departments.

Also of interest to the food trade is the appointment of S. P. Trixler as vice-president in charge of sales for the Portland, Eugene, and Ashland, Ore., offices of the firm. He was formerly a partner in the operation and has just recently resigned as General Sales Manager of the SeaPak Corporation, of St. Simons Island, Georgia, to accept the new position.

Head of the corporation, J. Thomas Trixler, started the brokerage firm in 1953 and has seen the business grow over 1400% since then. He will be in charge of both offices and his new residence will be in Hillsborough, Calif.

Port Costa Plant Sold

The old Port Costa Packing Co. sardine cannery and reduction plant at Moss Landing, Calif., formerly operated by Frank Richey, and of late years owned by Pacific Vegetable Oil Co., has been sold to Wesley Dodge & Associates, Monterey.

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The Gray V8 gives my boat an easy 15 M.P.H. Cruising at 11-12 M.P.H. my fuel consumption is very economical.

This engine really has the power when I need it, but she will also idle all day long without a miss.

I am certainly glad that I installed the Gray V8, and I would recommend this engine to any commercial fisherman who wants power, speed, economy and dependability.

George Robert Sheaves

Graymarine Fireball V8's are available at 135 hp, 170 hp, 188 hp and 225 hp. "Miss Lorelei" is powered by 225-hp model (right)

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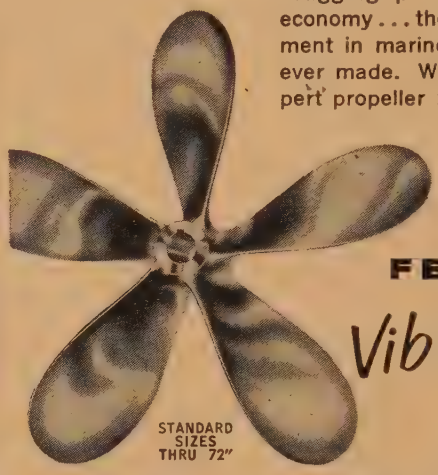

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THE CARRETT CORPORATION

AIR CRUISERS DIVISION
BELMAR, NEW JERSEY

FOOD FISH MARKETING

News and Views of National Trade in Fish and Shellfish

Section of PACIFIC FISHERMAN — JUNE, 1959

U. K. MARKET REPORT—

Britain's Salmon Buying Mood Continues Vigorous

● *British interest* in canned salmon continues vigorous and healthy as the trade approaches its second free market season.

Established brands of Reds have sold satisfactorily.

Sizable stocks are still probably on hand from last September's heavy buying, but prospect of a short pack in 1959 supports the expectation that the U. K. market will be firm through the year.

Demand for quarters of all grades is almost insatiable, and may be expected to continue through the coming pack. It is evidence of the paramount position of cost in determining demand.

Britain has been using some Chums, almost for the first time; but it is yet too early to say if the venture will prove profitable or develop permanence. Established factors generally are chary of Chums.

Summing up: The salmon market in the United Kingdom can be taken as in fairly healthy shape for Reds, with no considerable risk that any carryover will break the market down, as the bulk of the supplies are held in strong hands.

● These sentences are the substance of a special Market Report made for *Pacific Fisherman* in Britain and received in Seattle on the deadline day of this issue.

The survey was made by a highly qualified individual and may be accepted as broadly objective. Other points made include:

● Market price for *John West* brand virtually controlled the market price obtainable from wholesalers from the institution of the free market last fall. This price to wholesalers stood at 160/ per case of 48 halves Red until the middle of May, when the *John West* price was advanced to 167/6. This is expected to enable other buyers to consider the higher levels regarded as inevitable in view of the light supplies anticipated.

Bulk of the British salmon business continues to fall to the established brands of Reds. Packers labels seem to be sold principally in the cut-price markets, chain stores, super-markets and serve-yourself stores. Medium Reds, Pinks and fairly substantial quantities of Chums have been selling, but at sharply cut prices.

Beside the excellent quality generally characteristic of the supplies purchased for the United Kingdom, there are some quite sizable parcels of very poor quality salmon being hawked about, and finding some buyers among the uninformed. Feeling is that the "wide boys" who have been responsible for offering these goods will not long survive the inevitable reaction; and that new buying prices will be stiff enough to bar them out.

Southern California Domestic Tuna Receipts

Cumulative totals for 1959 through May 16, in tons, as reported by U. S. Market News Service

	Albacore	Bluefin	Skipjack	Yellowfin	Bonito, etc.	Total
San Pedro	6,296	2,000	12,043	36,485	110	56,934
San Diego	713	27	9,861	9,883	3	20,487
Total 1959 through May 16	7,009	2,027	21,904	46,368	113	77,421
Total 1958	5,325	1,670	20,708	39,977	309	67,989
Total 1957	7,818	104	18,026	38,640	42	64,630

Seattle Market

Market prices currently quoted at presstime by Pacific Northwest brokers and cannery sales department, cases of 48 tins, unless otherwise specified, good quality, as reported by the U. S. Bureau of Commercial Fisheries, Market News Service.

Items and Packages Puget Sound	Per Case
Sockeye, halves	$22 -24
Sockeye, quarters	12.50-13
Alaska	
Red, talls	34 -36
Red, halves	22 -24
Pink, talls	22 -23
Pink, halves	13 -14
Coho, talls	27 -28
Coho, halves	15.50-16.50
Coho, 4-lbs. (12)	31
Chum, summer, tall	18 -19
Chum, summer, halves	11.00-11.50
Chum, 4-lbs. (12)	18
Chinook, talls	30
Columbia River	
Blueback, halves	23
Blueback, quarters	12.75-14.50
Chinook, fancy, halves	25 -26
Chinook, fancy, quarters	13.75-14.50
Chinook, choice, halves	17 -17.50
Chinook, choice, quarters	10 -10.50
Silver, halves	17 -17.50
Silver, quarters	10 -10.50
Tuna, Northwest Pack—	
Albacore, fcy., 7 oz.	11.50-12
Yellowfin, chunk, 6½ oz.	9.50-10.50
Tuna, Featured Pack—	
Albacore, fcy., 7 oz.	14.85-15.25
Albacore, fcy., 3½ oz.	9.10- 9.50
Albacore, chunk, 6½ oz.	11.00-13.25
Albacore, chunk, 3 oz.	7.25- 8.00
Lightmeat, fcy, 7 oz.	13.75
Lightmeat, fcy., 3½ oz.	8.55
Lightmeat, chunk, 6½ oz.	12.50
Lightmeat, chunk, 3 oz.	7.50
Canned Crab—	
Dungeness, 24, 6½ oz.	11.50-12.50
Dungeness, 3¾ oz.	7.60
King, 48, 7½ oz., fcy.	29
King, 24, 15 oz., fcy.	26.50
King, 24, 7½ oz., fcy.	14.60
Northwest Shrimp—	
Wet Pack, 24, 4½ oz.	8
Alaska Shrimp—	
Tiny, 24, 4½ oz.	8
Small, 24, 4½ oz.	9
Medium, 24, 4½ oz.	10

McLoughlin Joins Dooms

John McLoughlin, formerly with the New England Fish Co., Astoria, Ore., is now in the seafood sales department of Wm. O. Dooms & Co., Oakland, seafood brokerage house.

SALMON —
No Sweat Over Sales; but How About the *Supply*?

● *Sales-wise*, the U. S. canned salmon market was comfortably well-off going into early summer. Shipments moved out as anticipated. Prices needed no overhauling. Weather began to shift salmon into summer shelf position in the retail outlets.

Supply for the future was something else again, and was giving the trade—and the producers also—more concern than they were willing to admit to anyone but themselves.

● Partial closure of Bristol Bay as result of Japan's fishing pressure on the high seas made one thing certain —as certain as anything can be in the salmon business: that Red salmon would be scarce to the point of shortage.

Japan finally came to a settlement with the Soviet Union, a sort of "shot gun" nuptial, in which it accepted an 85,000-ton catch quota for 1959, against 110,000 tons in 1958; with only 16,000 metric tons of Red salmon, as against 22,000 tons last year.

Face to face with the possibility that Congress may close the U. S. market to its high-seas-caught salmon because of the damaging effect of this activity on the Alaska resource, Japan is sure to seek support for its preferred market position in Britain—whether the U. S. gets this high seas salmon this year or not.

● Odd-year Pink run on Puget Sound may not amount to much this season. The scientific staff of the International Salmon Commission finds in its research evidence that the Pink run of 1959 will be far below normal. Early indications pointing in this direction continue to find further support as the season nears.

Early in the spring, in announcing the results of his staff's research, Loyd A. Royal, Salmon Commission director, said it might be possible that virtually complete closure of the Pink season would be necessary to provide escapement.

There have been no indications that the situation now appears more favorable.

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Japan and Peru Tuna Share Holland Trade

According to a Netherlands importer, Japan and Peru are now practically the only suppliers of canned tuna to The Netherlands. Wholesale prices quoted c.i.f. Rotterdam late in April for Japanese and Peruvian canned tuna were: Japan: white meat, solid pack in oil, 7-oz. cans, 48 cans/cs., U.S. $7.00-7.50 and in 3½-oz. cans, 48 cans/cs., $4.00-4.50; light meat in oil, solid pack, 7-oz. cans, 48 cans/cs., $6.00 and 3½-oz. cans, 48 can/cs., $3.00-3.50; and Peru: light meat, solid pack in oil, 7-oz. cans, 48 cans/cs., $6.00.

One of the leading brands of canned tuna on The Netherlands market is produced by the Peruvian subsidiary of a large California tuna cannery. As of the end of April, the Peruvian subsidiary was reported unable to make offers for shipment to The Netherlands because canned tuna stocks from the 1959/59 catch were about exhausted. The latest offer from the Peruvian firm (April 15) for solid-pack tuna in oil was $5.80 a case of 48 7-oz. cans.

Japan Market Prices

Price of Japan-packed fancy canned King crab was raised by $1 per case in May at the meeting of the crab packers' cartel in Otaru.

The $1 price reduction on Albacore canned in brine thus far has been limited to "Sale No. 5", as originally planned. Tuna packers meeting May 20 made no decision as to any change in price after conclusion of the "sale", which involved movement of 350,000 cases of canned tuna, of which 250,000 cases of Albacore were priced at the reduced figure. There was no price concession on the 100,000 cases of Lightmeat.

Whiz and Eardley Join Their Common Activities

Whiz Fish Products Co. has consolidated its Fresh and Frozen Fish Division with the entire operations of its related Eardley Fisheries Co.

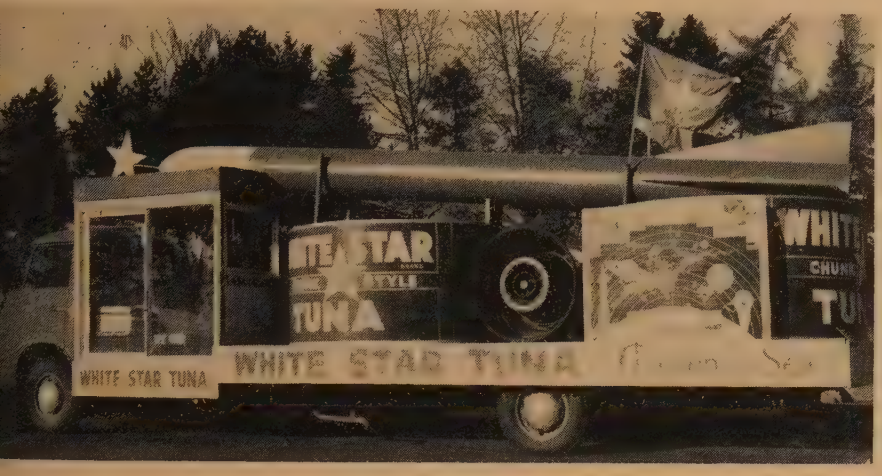
The business in the fresh and frozen field is now being conducted under the trade name of Whiz-Eardley Fisheries Co., Pier 65, Seattle 1, Wash.

Other activities of Whiz Fish Products Co. will continue as before, with its headquarters remaining at 2000 Alaskan Way, Seattle 1.

Country Club Day for L. A. Fresh Fish Men

Fresh and frozen fish wholesalers of Southern California will gather at Fox Hills Country Club June 19 for the annual Country Club Day sponsored by Southern California Fisheries Assn.

The day's festivities will include golf, horseshoes, softball and other sports in the daytime; and a social hour, dinner and entertainment in the evening. Grand door prize will be a trip to Las Vegas for two, all expenses paid. There will be other door prizes.



Stereophonic Organ Music Sells Tuna in a Big Way

Loy Robinson, for more than 20 years the representative of the Van Camp Sea Food Company in the Northwest, and now a Seattle food broker handling *White Star* and *Chicken of the Sea* tuna sales in that area, has recently come up with a new wrinkle in outdoor advertising. He has built, according to his own design and at a cost of almost $10,000, the first stereophonic sound truck in the nation, and is using it with great success to advertise *White Star* tuna at supermarkets all over the state of Washington.

Mr. Robinson had a truck extended 10′ to 30′. Behind the driver's cab he constructed a unique glass room with sliding glass doors, mounted on rubber to eliminate vibration, and installed a Lowrey electronic organ with an additional power speaker. On the bed of the truck he placed two of the largest University speakers ever made, and the entire public address system is tied together electronically with a tape recorder, phonograph pick-up and microphone.

Mr. Robinson is most enthusiastic over "live" stereophonic sound and high quality organ music as a means of point-of-sale merchandising. He feels that the quality of the stereophonic amplification also makes commercial announcements so pleasing in tone, and audible without "blasting" that their contribution to sales effectiveness is multiplied.

At present the bed of the truck is decked out with two giant-sized *White Star* tuna cans, and a large "supersonic rocket" which runs the entire length of the vehicle. These fixtures are removable and can easily be replaced with advertising material for any other food product or merchandise. Mr. Robinson plans on building additional sound trucks and leasing them out to serve the outdoor advertising needs of food producers throughout the Northwest.

Robinson's sound truck made its debut at Don Clark's supermarket in Bellingham. It drew huge crowds and was an instant success. Since then it has been in great demand and has been used by most of the large grocery chains in this area to spotlight the opening of a new store or pinpoint an outstanding sales event. Reports are that the truck display has helped to move a great deal of merchandise.

The unusual vehicle decorated with flowers and pretty girls appeared in the Apple Blossom parade at Wenatchee, and was awarded second prize as a commercial entry.

Imported Tuna Prices

Current prices reported by importers and brokers to U. S. Market News Service fob. warehouse, Los Angeles and San Francisco.

Market conditions: Canned White Meat supplies light, demand light, marked quiet. Light Meat supplies moderate, demand light, market dull. White Meat price changes were effective May 12.

TUNA IN BRINE (Japanese)

White, solid, 7-oz., 48	$ 12.00
White, solid, 13-oz., 24	11.00
White, solid, 4-lb., 6	12.81
Light, solid, 7-oz., 48	9.70
Light, solid, 13-oz., 24	9.05- 9.25
Light, solid, 4-lb., 6	10.50-10.98

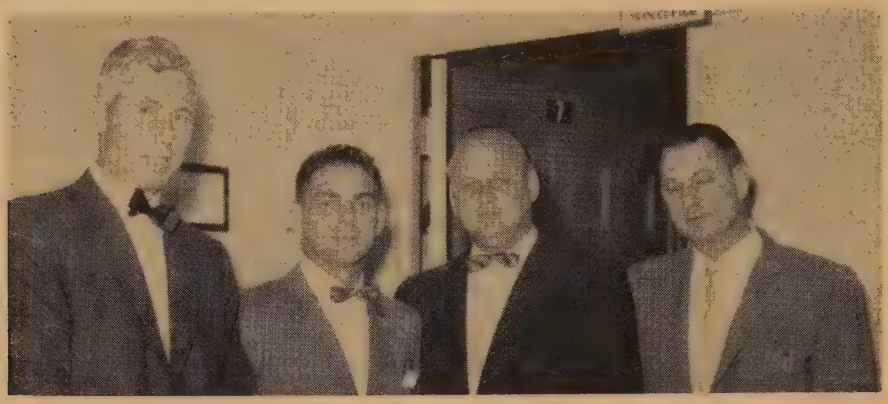
Quality
Pink Salmon
KELLEY-CLARKE CO.
2460 6th Ave. S.
Seattle 4, Washington

For over 65 years...

Bumble Bee has upheld and extended the reputation of the seafood canning industry by processing and marketing products of the finest quality.

In this way, Bumble Bee's matchless standards help to insure the growth of our own business, the welfare of our employees, and a constantly expanding market for the catch of the fishermen.

Columbia River Packers Assn., Inc.
Astoria, Oregon
Tuna, Salmon, King Crab Meat, Frozen Seafoods, Seafood Delicacies



Southern California's 1959 Fish and Seafood Week committee. Left to right: A. R. Lantz, Anthony Cigliano, Joe Sulentor, chairman, and Ray Lemoi. Also on the committee, but not in the picture, are Mike McGee, co-chairman, and Ed Schultz.

Californians Will Eat Plenty Fish Next Oct.

Fish and Seafood Week next October will be given an energetic push in Southern California, with Southern California Fisheries Assn. taking the lead.

Joe Sulentor of Western Fish Company was appointed chairman of the Fish and Seafood Week promotion committee, with Mike McGee of Los Angeles Smoking & Curing Co. as co-chairman. Other committeemen are Anthony Cigliano of Zankich Fish Co., San Pedro; A. R. Lantz of A. R. Lantz Co.; Ray Lemoi of Rayola Co.; and Ed Schultz of Amende & Schultz.

The fisheries association, made up of wholesalers and brokers of fresh and frozen seafood, also pledged itself to conduct a strong campaign through summer of fish as an outdoor barbecue dish. The effort will include advertising and promotion work through nutritionists, home economists, restaurant managements and other potential users of fish.

Japanese Pink Talls— How many at How Much?

Coincident with the conclusion of the Soviet-Japanese fishing arrangements for 1959 on the basis of a Japanese catch of 85,000 metric tons in their treaty area, there were reports from sources close to the Japanese industry that the pack of Pink talls would be limited to 250,000 full cases.

Moreover, there were reports that an American representative of one of the larger American salmon firms, was seeking to buy the entire quantity; and that the price under discussion in Tokyo was $16.75 per case, fob. Japan.

American distributors figure that such a buying price in Japan would require a selling price in the American market in excess of $23 fob. Pacific terminals to insure a profit on the transaction.

Japanese packers are said to be asking $9 per case of Pink halves, and expecting to put most of their production of this species into the can size most attractive to the British and European markets.

Upward Movement Manifest In Canned Salmon Prices

Canned salmon prices moved up a notch here and there in May.

There were no changes which had not been hinted previously.

Factors fortunate enough to hold Pink tails generally were pricing them at $23 at presstime, and $19 became the going price for Chum talls.

Prospects for limited production during the season just opening, together with a rather fully sold position in investory, left nowhere for prices to go but up.

They Add Up To A Lot of Sales!

Oceanic
SALES COMPANY
3302 SMITH TOWER
SEATTLE 4, WASH.

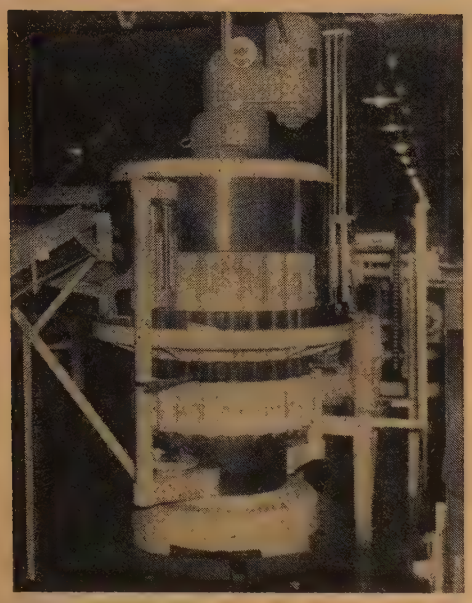
TWO GREAT BRAND NAMES IN FROZEN FRESH SEAFOODS

SAN JUAN

Ship Ahoy

FRESHEST FISH IN THE FREEZER
More than 37 Delightful Frozen Seafoods in Both Brands
NEW ALASKA KING CRAB MEAT
6 oz—1 lb—2½ lbs—5 lb sizes
SAN JUAN FISHING & PACKING CO.
PIER 31—SEATTLE, WASH.

The PAK-FORMER



Leading tuna canners are now using the PAK-FORMER for their Chunk and Grated Style Packs. A variable speed drive permits filling speed adjustments of between 140 and 250 cans per minute. Available to the industry under similar terms as our PAK-SHAPER.

For Complete Information Write to

E. H. CARRUTHERS CO.

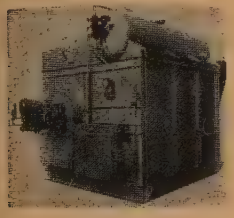
Engineers and Designers to the Food Packing Industry

P. O. Box 1332 Warrenton, Ore.

CHICAGO BUYERS "Phone FROHMAN for Fish!"
A COMPLETE SELLING ORGANIZATION

COMPLETE TRADE COVERAGE	50 YEARS OF SALES PROMOTION AND MARKETING EXPERIENCE	NATIONALLY RECOGNIZED HIGH STANDARDS OF SERVICE	SPECIALISTS IN BRAND BUILDING
RETAIL SPECIALTY WORK	CREDIT INVOICING AND TRAFFIC SERVICE	RECEIPT AND DISTRIBUTION OF CARS	CONSIGNED STOCK SELLING & RECORD KEEPING

H. FROHMAN & SONS Sales Agents
FOR PRODUCERS OF CANNED AND FROZEN FISH AND SEA FOODS
510 NORTH DEARBORN STREET CHICAGO 10



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BOILERS

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BOILER TUBES

— ALL SIZES —

QUICK DELIVERY

REPAIRS—24 Hour Service

COOKERS — RETORTS — PRESSURE VESSELS

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5237 E. Marginal Way, Seattle 4. PA 2-0737

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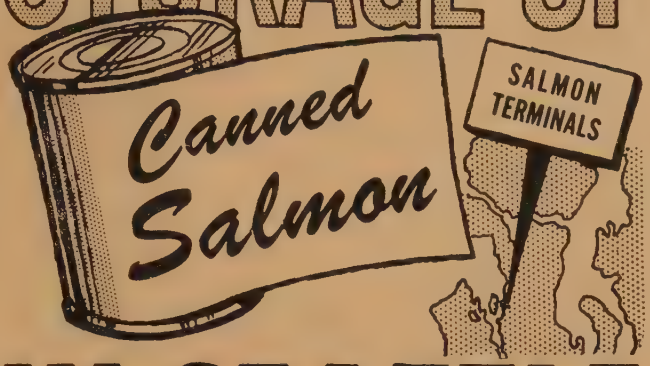


IN SEATTLE

Salmon Storage
CENTER OF THE WORLD

Because:

1. **MAJOR BANKS** are located conveniently in Seattle for speedy banking services.

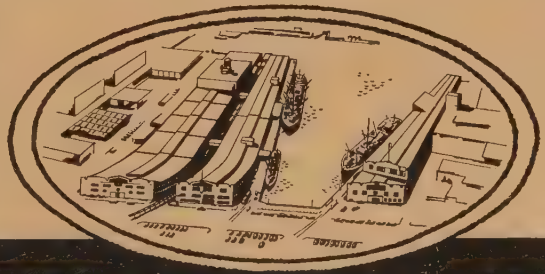
2. **BROKERS-DISTRIBUTORS** are only minutes away from storage warehouse, assuring the fastest possible deliveries.

3. **INSPECTION SERVICE** offices are located in Downtown Seattle offering immediate service—no delays.

4. **TRANSPORTATION** nerve center of the Northwest, Seattle has direct connections with 4 trans-continental railroads, major motor transport and shipping companies.

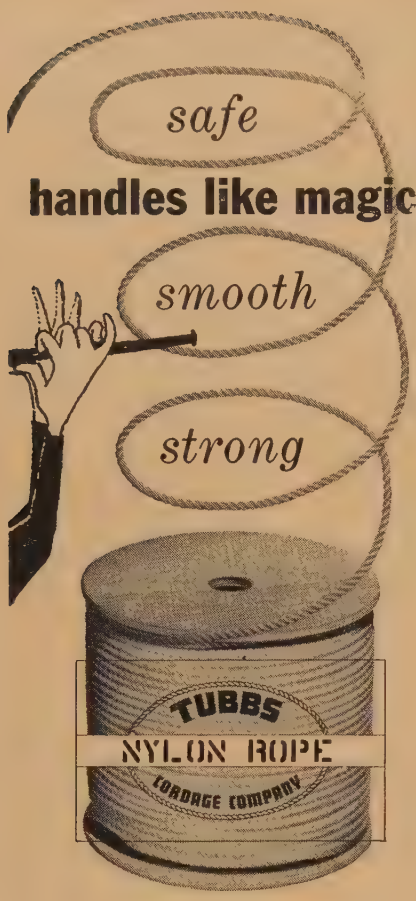
5. **LARGEST CAPACITY** is offered at Salmon Terminals in Seattle. Largest storage warehouse in the world for canned salmon. Can load up to 40 railroad cars and serve 4 ocean going vessels per day.

6. **LOWEST INSURANCE** rates in the Northwest on canned salmon at Salmon Terminals.



SALMON TERMINALS

PIER 24 · SEATTLE, WASHINGTON



Tubbs Nylon Rope has twice the tensile strength of Manila Rope of the same size, yet is lightweight with excellent working elasticity plus a smooth lustrous surface for easy handling. Rot and mildew resistant, it needs no treatment and can be stored wet.

other Tubbs synthetic ropes

Dacron Rope for excellent resistance to damage from abrasion, sunlight, rotting or marine organisms with an elasticity about half that of nylon rope.

High Tensile Polyethylene for 1½ times the strength of manila rope. Rot resistant, practically non-absorbent, and it floats.

For complete information about Tubbs line of synthetic and natural fiber rope, write Dept. A-6

TUBBS CORDAGE COMPANY

San Francisco, Seattle, Portland, Los Angeles, New Orleans, Houston, Chicago, New York

William E. Warne, former Assistant Secretary of the Interior, replaces Seth Gordon as director of California Department of Fish and Game.

W. E. Warne Chosen Calif. F. & G. Director

William E. Warne, former newspaperman, and director of the American aid program in Korea, has been appointed by Gov. Edmund G. Brown director of the California Department of Fish & Game, taking the place of Seth Gordon, who had headed the department since September, 1951.

Mr. Warne, a resident of California since 1914, received his early schooling in the Imperial Valley, and graduated from the University of California in 1927. From 1925 to 1935 he was a California newspaperman, and in that year joined the U.S. Bureau of Reclamation, Department of the Interior, with which agency he was connected for the next 16 years. He was Assistant Secretary of the Interior for Conservation for two years, and Assistant Secretary in charge of water and power development for another two years.

He was also in charge of the Alaska development program for the Department for two years and was chairman of the Federal Inter-Agency River Basin Committee.

Standard Steel Builds Fish Plant for Poland

A California-made fish reduction plant, complete in a package, was shipped last month to Poland, for use by the Poles in reducing codfish offal to useful fish meal and oil.

The equipment consists of a steam tube rotary dryer 40 ft. long by 5 ft. diameter; an indirect-fired cooker 2½ ft. by 24 ft.; a press; and raw fish conveying equipment, including a screw-type elevator.

The plant is being sent over under a $25,000,000 credit allowed Poland by the U. S. for assistance to the Polish civilian economy. The loan is to be paid back in dollars.

The effect of fish reduction on the entire Polish economy can be judged by the fact that, according to announcements, the meal will be used to feed Polish cattle and poultry, and the oil in making paints and pharmaceutical products, and for tanning leather.

The plant was manufactured and shipped by Standard Steel Corp. of Los Angeles. Standard Steel recently shipped and installed two complete canneries and a meal-and-oil plant in Korea. The equipment was purchased by the UN Korean Reconstruction Agency, and is to be used for processing mackerel, squid, tuna, anchovies and smelt.

Two Cook Inlet Shrimp Canneries Consolidated

Richard Sutterlin and Ivar Went in May added the shrimp cannery division of Whitney & Co. at Seldovia to the Cook Inlet Packing Co. property which they had purchased earlier.

Before the end of the month Mr. Sutterlin, who will be in charge of operations in Alaska, was busy working out the consolidation of the two plants in the Whitney & Co. location.

The other phases of the Whitney & Co. activities at Seldovia, including the salmon canning, refrigeration, frozen fish, King crab, reduction and curing departments, are not affected by the transaction.

With the consolidation of the Cook Inlet and Whitney plants in one, the Pacific Pearl project will have two shrimp-picking machines and substantial capacity.

Shrimping in the Cook Inlet district has been good this spring and the Sutterlin and Wendt operations will be served, among other craft, by the *Pacific Pearl,* which went north from Seattle May 20 after being fully overhauled and modernly fitted for shrimp trawling.

The former Cook Inlet Packing Co. salmon cannery will be used as the can reforming plant and fishermen's gear facility.

Production of the Sutterlin & Wendt operation will be sold under the *Pacific Pearl* label by Ivar Wendt, sea food broker, Central Building, Seattle.

Pacific Oyster Growers Meet in Seattle Aug. 26-8

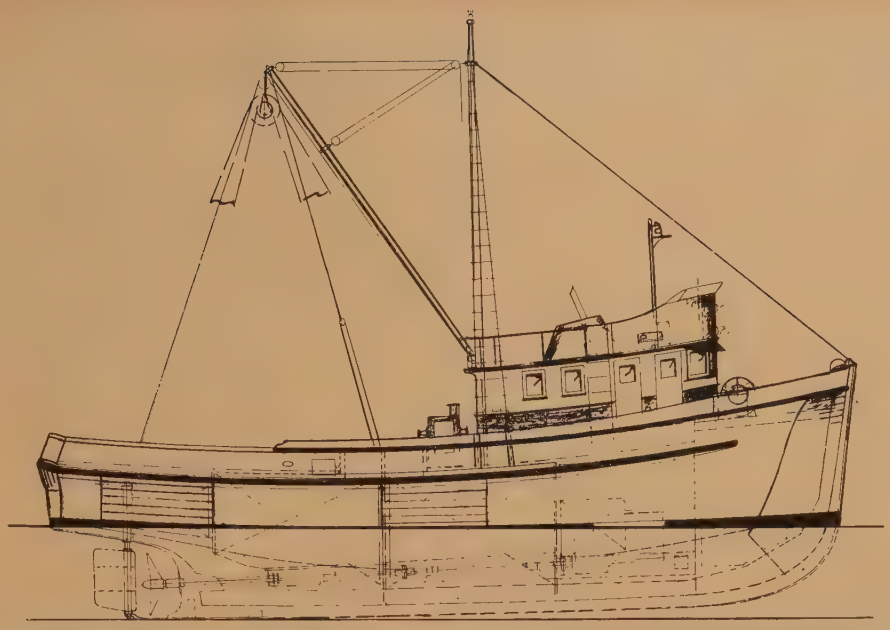
Edward J. Gruble, president of the Pacific Coast Oyster Growers Association, announced late in May that the annual convention of the association had been scheduled for Aug. 26-28 at the Benjamin Franklin Hotel, Seattle.

H. C. Hanson Girdles World Studying Fish Boats

H. C. Hanson, Seattle naval architect, returned to Seattle the middle of May after a trip around the world for the purpose of studying modern trends in fishing vessels and the application to international fisheries of designs, boats and equipment proven in the fisheries of Pacific North America.

Mr. Hanson was vice chairman of the World Fishing Vessel Congress held in Rome, and this was the principal objective of the trip. He presented two papers at the congress and reported special interest evidence in his design of a 57' Alaska Limit combination boat of V-bottom design for either steel or wood. This craft, which costs from 10% to 15% less than a round bottom craft of equal dimensions, proved particularly attractive to fishermen in a number of areas of Europe and Asia.

En route to Europe Mr. and Mrs. Hanson visited the Caribbean; thence to England, France and Norway. At Rome they spent three weeks at the congress, going on to Greece and Turkey, spending several days each in Athens and Istanbul. From there to Karachi, Pakistan, where Mr. Hanson found the shrimp industry booming and the developers of it interested in larger boats of American design.



INTERNATIONAL ATTENTION was commanded by this V-bottom Alaska limit seiner design at the World Fishing Boat Congress in Rome this spring. This was a vessel featured by H. C. HANSON, vice chairman of the conference, in one of his papers at the international meeting.

Some days were spent in New Delhi, India; then Hongkong and Manila. In these two latter ports he found boat construction active, with the Philippines particularly interested in developing their abundant fisheries.

The Hansons then visited Japan, spending four days in Tokyo; and completed their trip with a week in Honolulu, where some of the leading tuna producers are Hanson-designed.

Mr. Hanson returned with high regard for the opportunities offered in many ports for the development of industrial fishing—and for the substantial progress made in some. He found American fish boat design well regarded in all areas.

More Shrimp than ever before* are processed by Peelers Co. Machines**

*More than ¼ of the total catch

**The Peelers Co. specializes in shrimp peelers, deveiners, and graders.

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THE PEELERS CO.

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Write, wire, or phone

Here's the one for rigs that need *real* power . . . Evinrude's great "Four-Fifty." New, compact V-4 design. 70.7 cu. in. displacement. Delivers 50 solid b.h.p. at 4500 revolutions—easily, smoothly, quietly—in toughest day-in, day-out service. See your Evinrude dealer—he's listed in the yellow pages under "Outboard Motors." Complete range of models to choose from. Evinrude Motors, 4154 N. 27th Street, Milwaukee 16, Wis. *A Division of Outboard Marine Corporation. In Canada: Mfd. by Evinrude Motors, Peterborough.*

EVINRUDE

quiet outboard motors

Acronize Use is Simple In Ice or Dip Solution

● Governmental clearance on the use of the antibiotic Aureomycin chlortetracycline to retard spoilage of whole, headed or gutted fish, unpeeled shrimp and shucked scallops affords U. S. commercial fisheries and processors a new way to reduce losses and maintain high quality for longer periods than heretofore possible, according to the Agricultural Division of American Cyanamid Company, which manufactures the product under the brand name Acronize chlortetracycline.

According to B. F. Bowman, marketing director of the Agricultural Division, the freshness of fish can be prolonged by Acronize applied as an ice, dip, spray or refrigerated brine.

This versatility in application makes it possible to start retarding bacterial spoilage minutes after the fish are caught, Mr. Bowman pointed out. Cyanamid has developed a method of uniformly dispersing 5 parts per million of the antibiotic in block ice and in flake or chip type ices.

Converted into crushed ice for fishing vessel bins, it is capable of protecting the freshness and quality of the catch layer by layer for days longer.

Acronize is available to processors in dry powder form containing 10% Aureomycin. It is also available in a 16½% form for use in block ice.

There is no delay involved in using the product, when the processor dips whole, headed or gutted fish. The normal dipping time required is a minute or less.

Research shows that the antibiotic activity found in fish flesh is influenced more by solution strength than by immersion time. Moreover, the dip is equally effective when made up with fresh or sea water, Mr. Bowman added.

While Acronize considerably extends retention of high quality in texture, appearance, color, odor and flavor of fish, it is not a substitute for refrigeration. Adequate refrigeration and sanitation must be maintained at all times, he cautioned.

Specifically, the tolerance of Acronize permitted according to the wording of the order, is "5 ppm. in or on fish (vertebrate), scallops (shucked), shrimp (unpeeled) from application for retardation of spoilage to whole, headed or gutted fish (vertebrate); scallops (shucked); shrimp (unpeeled); each in fresh, uncooked, unfrozen form.

Fish approved for treatment with Acronize retain only a minute amount of the antibiotic. After cooking, virtually no antibiotic will be found in the treated fish.

Acronize is not new to the United States. An estimated one-half billion pounds of poultry have been treated here with the product since its introduction in 1956. Evidence that it is equally effective in controlling spoilage of fish has been established by intensive research and successful use of it for the past two years in Canada and Japan.

Northwest Instrument Co. Handles Bludworth Marine at Seattle

Bludworth Marine, manufacturer and distributor of precision electronic equipment for navigation and underwater survey, has announced the appointment of Northwest Instrument Company, Inc., of Seattle as a complete dealer and service agency. Operating with expanded facilities, Northwest Instrument has its new headquarters at 1403 West 45th Street, Seattle 7.

Northwest Instrument will handle sales of Bludworth Marine products throughout the state of Washington, and will service Bludworth Marine depth sounders and direction finders.

Bludworth Marine products include marine radar, depth sounders, radio direction finders, radio telephones, power divers, underwater metal locators and underwater television cameras.

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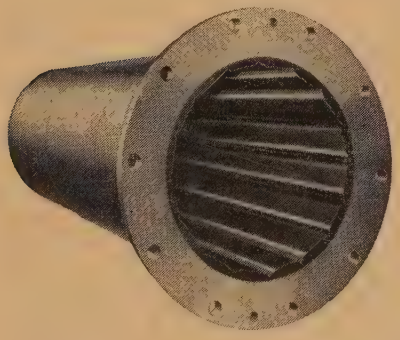

Tuna clipper "Carol Virginia", built by National Steel & Shipbuilding Corporation, San Diego, uses Cutless bearings.

CUTLESS BEARINGS IMPROVE THE PERFORMANCE OF ANY VESSEL!

If you fish for a living you know the importance of dependable propeller shaft bearings. The kind that gives years of trouble-free, QUIET operation. The kind that saves shafts and keeps boat out of drydock. That kind is CUTLESS—the soft rubber, water lubricated bearing —the bearing fishermen depend on to keep them fishing.

Buy them from your favorite Marine Supply House or Ship Repair Yard when you haul out. Large west coast stocks, popular sizes. Factory stock to 11½-inch shaft size available overnight by air.

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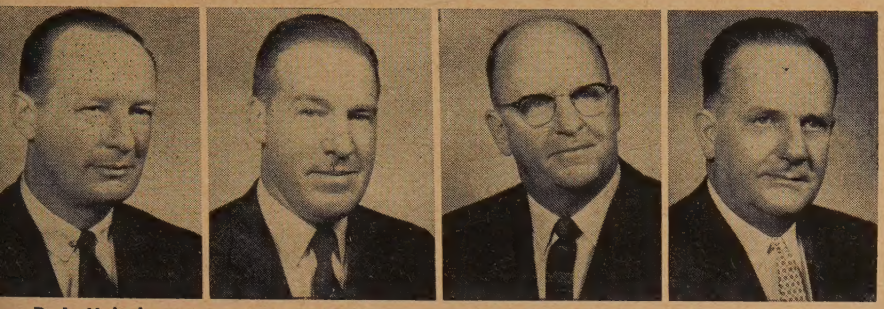
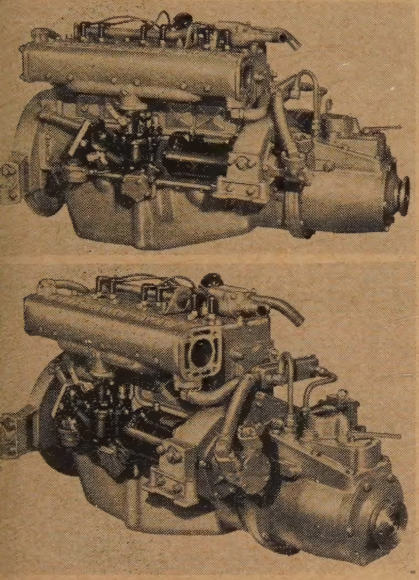


D. L. Malcolm | Stewart Jenkins | Howard Johnson | F. W. Flewelling

Four key men in The Linen Thread Company's revamped organization. Mr. Malcolm is vice president and general manager; Mr. Jenkins is merchandise manager; Mr. Johnson is sales manager; and Mr. Flewelling is netting product manager.

Chrysler Offers Revised Versions of Ace and Crown

Chrysler Ace and Crown marine engines are now being offered in revised versions with improvements which are sure to make them of the greatest interest to commercial fishermen, according to Lawrence E. Nelson, sales manager of the Chrysler Marine and Industrial Engine Division.



New Chryslers—Crown, 125-hp., top; and Ace, 110 hp., both shown with the hydraulic reverse gears with which they now come equipped at no extra cost.

The horsepower rating on the Ace has been increased from 95 to 110 hp. and both new engines will be equipped with hydraulic reverse gear at no extra cost. Previously the item was optional in both instances.

Equipping the two new engines with Paragon hydraulic reverse gear was made possible by the great demand for the recently introduced Chrysler Sea-V, which has the same reverse gear.

Mr. Nelson also announced that the White Diesel Engine Division, Seattle, The White Motor Co., has been designated as an approved Chrysler engine center for the Seattle area. It is prepared to furnish full details about the new reverse gear-bonus Ace and Crown models.

RPM Outboard Motor Oil Meets Fishermen's Problems

Lubricating problems of outboard motors working under the arduous service required of engines in commercial fishing were one of the specific objectives of the California Research Corporations, subsidiary of the Standard Oil Co. of California, in developing the parent company's new RPM Outboard Motor Oil.

This specialized lubricant for two-cycle engines where the lubrication is supplied by oil mixed with the gasoline contains a special detergent-action additive that leaves no metallic ash when burned. Extensive field tests showed that this new product not only prevented piston skirt deposits and piston ring sticking under either cold or hot operating conditions but also displayed detergent properties in the combustion chamber and engine ports.

The new oil can significantly improve the performance of "dirty" engines.

Another novel feature of this oil is that it will gradually remove water from the engine fuel system instead of allowing it to accumulate in the tank, fuel strainer, and carburetor.

This new oil is available throughout the seven western states, Alaska and Hawaii, at all Standard Marine Dealers and through your local marine engine dealer in many areas and through all of Standard's wholesale outlets.

Snow-Nabsted Picks Nelson Firm as N.W. Representative

To further the sale of S-N Gears in the States of Oregon, Washington and Alaska, The Snow-Nabstedt Gear Corporation has recently appointed a manufacturer's representative, The A. H. Nelson Company, of Seattle. The owner, Arthur Nelson, will work closely with engine distributors, Naval architects and shipyards which influence principally the sales of S-N marine products.

Arthur H. Nelson, Pacific Northwest representative of the Snow-Nabstedt Gear Corporation.

The present local S-N distributors will be responsible for parts and service, and still may be contacted for S-N marine transmission equipment. In effect, therefore, The A. H. Nelson Company will help the manufacturer in obtaining sales and technical information from the field.

Mr. Nelson has been known for many years in the Northwest marine trade. He has in the past been associated with Jules Engine and Equipment Company as Gray Marine distributor. He has also acted as factory representative for Kermath Manufacturing Company and Universal Motor Company.

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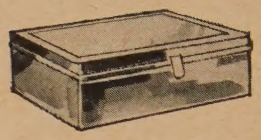

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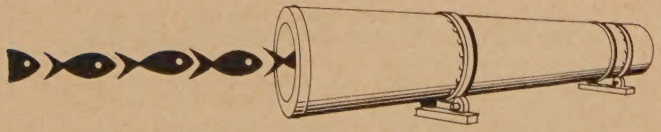

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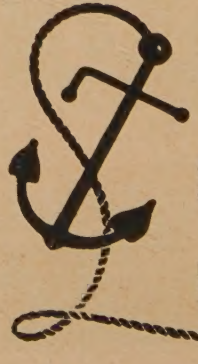

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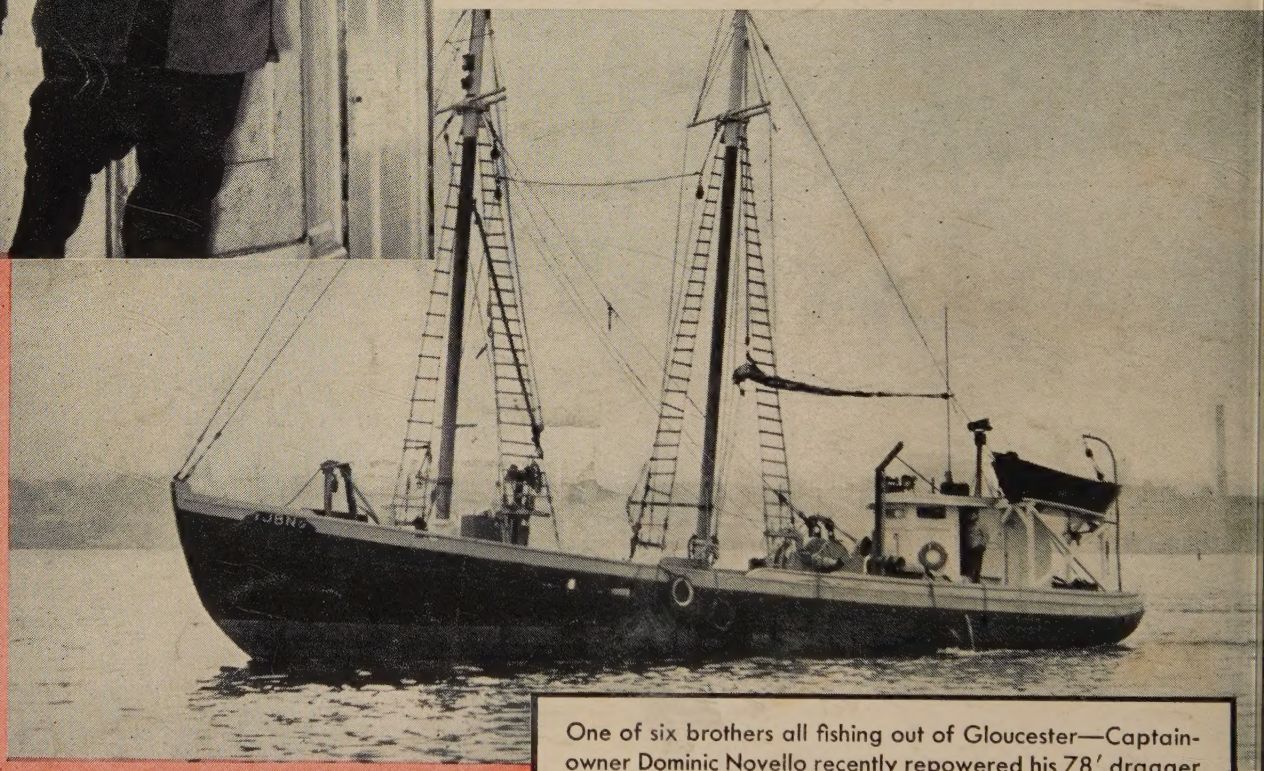
THE CAPTAIN SPEAKS—

Captain-Owner Dominic Novello says:

"Since I installed a Waukesha 315 hp engine in the "JBN" I haven't had a bit of trouble with it. It performs perfectly, maneuvers very well, is economical on fuel and gives me plenty of power. It's a good clean engine. *I would certainly recommend it to any fisherman who wants power plus dependability.*"



428

78′ dragger "JBN" is powered by a

WANDERER

WAUKESHA

MARINE DIESEL

One of six brothers all fishing out of Gloucester—Captain-owner Dominic Novello recently repowered his 78′ dragger "JBN." He picked a Waukesha Wanderer, 1905 cu. in. Turbocharged Diesel, 6-cylinder, 7″ x 8¼″, 315 max. hp at 1200 rpm for 24-hour duty; with 3:1 Snow-Nabstedt reverse reduction gear. The "JBN" also has an Ingersoll Rand air starter; Ross heat exchanger; 54 x 43 Columbian Bronze propeller; forward power take-off clutch is a Snow-Nabstedt 2:1 red. gear. Installation was made by Hathaway Machinery Co., Inc., Fairhaven, Mass. Read again what Skipper Dominic says about his Waukesha, then send for Bulletin 1720.

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